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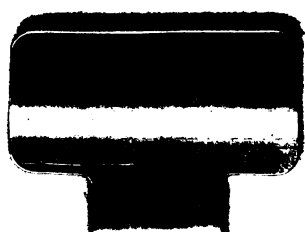
TENTH BIENNIAL REPORT
OF THE
STATE BOARD OF HEALTH

TO THE
GOVERNOR OF NORTH DAKOTA

FOR THE YEARS
1907 and 1908

ALSO
REGISTRATION REPORT
OF VITAL STATISTICS

BISMARCK, N. D.
TRIBUNE, STATE PRINTERS AND BINDERS
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LETTER OF TRANSMITTAL

OFFICE OF SECRETARY,

Grand Forks, N. D., Oct. 31, 1908.

To His Excellency, John Burke, Governor of the State of North Dakota:

SIR: In compliance with the laws of the state, I have the honor to present to you the tenth biennial report for the period ending June 30, 1908.

Respectfully,

J. GRASSICK, M. D.,
Secretary State Board of Health.

MEMBERS OF STATE BOARD OF HEALTH.

T. F. McCUE, Attorney General.....President
C. E. BENNETT, M. D.....Vice President
J. GRASSICK, M. D..Secretary and State Registrar of Vital Statistics



ERRATA

- Page 12, 5th line from bottom, "1907" instead of "1908."
 Page 13, line 18, last word should be "uncorrected."
 Page 26, line 4, "4" instead of "114."
 Page 27, line 8, "readable" instead of "reliable."
 Page 30, line 32, omit the word "set."
 Page 35, line 29, insert "A" before "few."
 Page 36, line 32, first word "cold" instead of "soft."
 Page 38, line 21, "organizations" instead of "organized."
 Page 42, line 22, "ingestion" instead of "indigestion."
 Page 42, line 19, "The" instead of "A;" line 27 "with" before "millions."
 Page 53, line 4, "J.A. Rankin, M. D.," instead of "James Sifton, M. D."
 Page 89, Sec. 273, line 5, "destroying" instead of "examining."
 Page 131, licensed embalmers "Axdal" instead of "Ayval;" Mrs. "H. J. Bracklesberg" instead of Mrs. "H. P."
 Page 133, "Plimpton" instead of "Plaineton;" "Powlison" instead of "Powdison;" "Prytz" instead of "Phytz;" "Pederson" instead of "Pedeson."
 Page 135, insert "Aneta, Meidell, R., Nelson."
 Page 137, Dickey "Hobert" instead of "Tobert;" insert "Dickinson" before "Smith, L. C."
 Page 138, Fargo "Kachelmacher," instead of "Kechelmacher;" "Mallarion" instead of "Wallarion;" "Kennedy" instead of "Kennady."
 Page 140, omit "Irene. Law" and Irving, "Wiltrout."
 Page 142, omit "Mayville, Berg, C. A."
 Page 143, "J. T. Newlove Minot," instead of "U. T.;" "Wendell, G. W." instead of "Windell;" "W. E. Bodensstab" at New Salem instead of "W. K."
 Page 144, "Brustad" instead of "Burstad;" "Schanche" instead of "Schance;" "Van de Ever" instead of "Vand Ever;" "Ablanope" instead of "Abplanope;" "Russell" instead of "Russe" Bottineau County; "Rudser" instead of "Ruder."
 Page 145, "Conrod" instead of "Concord;" "Dalangle" instead of "Dalangar;" insert "Dr. Duncan, Upham, McHenry County."
 Page 146, "Savage" instead of "Salvage;" "D. K. Thyng, Willow City, Bottineau County."
 Page 147, "Cass" County instead of "Sass;" "J. G. Leeds" instead of "G. H."
 Page 149, insert "Dr. Duncan," Upham, McHenry County.
 Page 153, omit "J. R. McKenzie, New Rockford;" insert "R. Meidell" Aneta, Nelson County."
 Page 154, "Morris" instead of "Morria."
 Page 155, omit "O. W. Rowe."
 Page 157, "Van de Ever" instead of "Vende Ever;" J. W. Warren" instead of "J. D."



REPORT

The limit of size of our biennial report makes it impossible to give all the labors of the board for the period. All extraneous matter has been excluded and only such as might be considered of general interest has been given a place. The work of the State Board of Health has grown steadily from year to year. This is due to a number of causes and in the nature of things is only what might be expected. The rapid development of our state; the great increase of our population; the advancement in municipal improvements; the organization of new counties; the enactment of sanitary and vital statistic laws by the legislature, and a widespread appreciation of the services rendered by the various agencies that have to do with the preservation of public health, are factors that have made increasing demands upon our time and resources. The somewhat limited appropriation at our disposal has hampered considerably the work of the department, but notwithstanding this handicap much has been accomplished, and decided gains have been made along certain lines of sanitation as may be seen by referring to the matter contained in the body of this report. North Dakota has now reached that stage of its development where its various institutions are well established and its machinery of government running without much friction. It must take its place as one of the older states. The department of health should not be allowed to take a secondary position. The health of a community, state or nation is its greatest economic asset. We must not only build a wall to protect the people from foes without, but we must guard them from enemies within. Hitherto the office of Superintendent of Public Health has been looked upon as a sort of side issue and as a consequence it has been passed around; while the amount available for the use of the department has been entirely inadequate to meet its most urgent demands. The time seems ripe for a change. The health officer of the state should be given a salary sufficient to make it an object for a competent man to devote his whole time to the work, and with a sufficient appropriation at his disposal that he may be able to carry on an aggressive warfare against disease. In this way only can we hope to raise the department to that standard of efficiency commensurate with its importance.

I wish to express my thanks to those health officers throughout the state who have intelligently and harmoniously worked with the department in bettering the sanitary conditions of their several localities. It is only by co-operation that the best results can

be obtained. The moral and material influence that a faithful and efficient health officer is capable of exerting in his community can hardly be overestimated. It is therefore of the first importance—if the best work is to be done—that these positions of trust be given to men who are qualified and who take a keen and lively interest in the work of the office.

FINANCIAL STATEMENT.

RECEIPTS.

Balance of appropriation, 1906.....	\$2,906.96
Appropriation State Board of Health.....	3,000.00
Appropriation secretary's salary.....	2,400.00
Total	\$8,306.96

DISBURSEMENTS.

Date	To Whom Issued	Amount
7- 5-1906	Edith Andrews, salary April and May.....	\$ 100.00
7- 5-1906	H. H. Healy, stamps \$23; sundry expenses, 2.60	25.60
7- 5-1906	G. F. Herald, printing vital statistics.....	10.00
8-18-1906	Banner Publishing Co.; stationery.....	60.25
8-18-1906	Edith Andrews, salary June and July	100.00
9- 5-1906	H. H. Healy, stamps \$10; rent \$10; sundries, \$5.25	25.25
10- 5-1906	H. H. Healy, stamps \$10; rent \$10; express \$1.30	31.30
11- 5-1906	Edith Andrews, salary, August.....	50.00
12- 4-1906	Edith Andrews, salary, September and October..	100.00
12- 4-1906	H. H. Healy, rent	30.00
12- 4-1906	H. H. Healy, rent \$20; sundries .25.....	20.25
12-20-1906	H. H. Healy, expenses to Washington, D. C....	152.63
12-21-1906	Prof. Bannon, water analysts.....	20.00
12-21-1906	Herald, stationery and printing	25.00
1- 1-1907	Cancelled balance	1,275.30
1- 7-1907	Edith Andrews, salary, December and November	100.00
2- 4-1907	Herald, vital statistics	6.00
2- 4-1907	Statstidende, envelopes	7.50
2- 4-1907	H. H. Healy, traveling expenses, \$21.42; stamps, \$15; sundries, \$11.48	47.90
3- 6-1907	H. H. Healy, copying \$21.70; stamps, \$15; sundry expenses, \$9.85	46.55
3- 7-1907	Edith Andrews, salary, June.....	50.00
3-21-1907	Herald, printing and stationery	41.25
5- 1-1907	Edith Andrews, salary, February.....	50.00
5- 8-1907	Herald, printing and stationery	14.75
5- 8-1907	H. H. Healy, rent, \$20; stamps, \$20; sundries, \$12.75	52.75
5- 8-1907	Edith Andrews, salary, March and part of April	62.50
5-14-1907	Herald, vital statistics	6.00
6- 3-1907	Dr. J. Grassick, expenses for April stamps.....	15.00
6- 3-1907	Eva Watson, salary	26.25

DISBURSEMENTS—Continued.

Date	To Whom Issued	Amount
6- 3-1907	Vault rent	3.75
6- 3-1907	Miscellaneous expenses	7.75
6- 3-1907	Times Publishing Co., printing.....	3.75
6- 3-1907	T. F. McCue, expenses, etc., board of health..	24.00
6- 3-1907	Wardwell & Thompson, stationery	47.00
6- 6-1907	C. E. Bennett, expenses, etc., board of health...	19.25
7-16-1907	Herald, printing and stationery	40.80
8-27-1907	Times Publishing Co.....	11.50
8-27-1907	Expenses for July	
	Traveling expenses	35.75
	Eva Watson, salary	40.00
	Vault rent	5.00
	Herald, printing	10.50
9-28-1907	Expenses for August	
	Stamps	10.00
9-28-1907	Eva Watson, salary	40.00
	Vault rent	5.00
	Press Publishing Co.....	4.00
	Miscellaneous expenses .....	.85
1-21-1908	Expenses for September	
	Stamps	5.00
	Eva Watson, salary	40.00
	Vault rent	5.00
	Press Publishing Co.....	4.25
	Miscellaneous items	1.75
1-21-1908	Expenses for October	
	Eva Watson, salary	40.00
	Vault rent	5.00
	Press Publishing Co.....	8.00
1-21-1908	Expenses for November	
	Stamps	5.00
	Herald, printing	6.00
	Vault rent	5.00
	Eva Watson, salary	40.00
	Miscellaneous items	2.34
3-23-1908	Expenses for June	
	Conference at Washington, D. C.	100.95
	Stamps	20.00
	Dues for conference	10.00
	Herald, printing	10.50
	Vault rent	5.00
	Eva Watson, salary	40.00
	Miscellaneous items	6.26
3-31-1908	Expenses for January, 1908.....	
	Stamps	5.00
	Vault rent	5.00
	Eva Watson, salary	40.00
	Press Publishing Co.....	4.75
	Miscellaneous items	2.80
4-20-1908	Expenses for February, 1908.....	
	Stamps	5.00
	Herald, infectious disease blanks.....	13.50
	Vault rent	5.00
	Eva Watson, salary	50.00

DISBURSEMENTS—Continued.

Date	To Whom Issued	Amount
4-20-1908	Ida Boe, office work	4.00
	Miscellaneous items	6.95
	Expenses for December, 1907	
	Stamps	5.00
	Vault rent	5.00
	Eva Watson, salary	40.00
	Traveling expenses	5.60
	Press Publishing Co., printing	5.50
	Miscellaneous	2.20
	Expenses for March, 1908	
5- 7-1908	Postage	16.00
	Eva Watson, salary	50.00
	Vault rent	5.00
	Office furniture	36.00
	Miscellaneous items	4.45
6-27-1908	Expenses for April, 1908	
	Postage	15.00
	Eva Watson, salary	50.00
	Times Publishing Co.	12.00
	Vault rent	5.00
	Miscellaneous items	1.65
6-30-1908	Secretary's salary, 24 months	2,400.00
Total		\$ 6,021.38
Balance		2,285.58
Total		\$ 8,306.96

COMMUNICABLE DISEASES.

The field of preventive medicine during the past few years has been very much widened. Sanitary research has resulted in ascertaining the causes and methods of transmission of many of our diseases, and with this knowledge has come the demand from the public for its practical application for the benefit of humanity. Before much can be done it is imperative that a complete record of each case of a communicable disease occurring in the state be supplied to the health department. It is not enough to report the death alone; our work is practically with and for the living. All the cases that are infected as well as all those that have died must be reported. With this information at our disposal we are in a position to deduce rational and intelligent methods for its control. The importance to the department of having a correct and full record of all such diseases as an aid to its efforts to prevent their spread cannot be over estimated. This applies with special force to tuberculosis. There is probably no disease in which there is such a widespread ignorance of its contagiousness and no disease in which this fact has been more clearly demonstrated. There is no disease where it

is so important to have full and correct reports, and there is no disease which offers greater opportunities for the application of sanitary knowledge or the careful prophylaxis of which promises greater benefits to the individual, community or state. Definite information of each case is the foundation upon which must be built our methods for intelligently and successfully combatting the disease, and yet in spite of all this, it is the disease of all others of which we get the poorest and most meager reports. Typhoid fever is about as amenable to preventive treatment and very nearly as poorly reported. This is not as it should be. It is the plain duty of the physician to report all cases of a contagious nature as soon as they are detected to the superintendent of health of their various counties and it is the duty of the county official to see that this is done and report direct to the superintendent of public health all such cases as are brought to his notice. In this connection I must express the gratitude which I feel for the conscientious manner in which a number of the county health officers throughout the state have performed their duties, but on the other hand, I must express my disapproval of the manner in which some others have done their work. The latter class seem to hold their office by the grace of good fortune, and the community is certainly fortunate that escapes them. An official that assumes the responsibilities of guarding the health of the people within his jurisdiction has a trust second to none in the commonwealth. I would strongly urge upon those intrusted with their appointment the necessity of getting the best man at their disposal for the position irrespective of sect, politics or social position, and would recommend that this appointment receive the endorsement of the superintendent of public health before becoming effective. In this way the inefficient and careless officials could be eliminated while those who faithfully and conscientiously attend to their duties could be retained. A reference to the reports of county and city health officers in the body of this volume will serve to emphasize some of the above statements.

A matter of vital importance to the prevention of the spread of infectious and contagious diseases in the state institutions where large numbers meet and mingle in class rooms and dormitories is the providing of suitable hospitals for the isolation of suspected cases and for the proper care and treatment of those cases in which the diagnosis has been well established. A number of our institutions are very inadequately supplied with these conveniences, or rather necessities, and I would strongly recommend that the next legislature be asked to remedy this defect.

SLAUGHTER HOUSES.

The control of slaughter houses is a question that is receiving the attention of health authorities in various parts of the country. A special bulletin was prepared and issued by us calling the atten-

tion of the public to some of the grosser evils incident to the present system. In replies from health officers included in this report, to the question "What conditions detrimental to public health exist in your county?" it will be noted that a great many of them called attention to slaughter houses and to the unsanitary manner in which they were conducted. This together with a number of complaints that have been made to this office would indicate that the nuisance is quite general; and, that as a source of danger to the public health, it takes precedence over most other unhygienic conditions existing within our state. The production and preparation of a food product so generally used as that of meat should make us careful to guard it against any contamination that would likely be detrimental to the public health. In the absence of any special legislation on the subject the best interests of the public would seem to demand that something be done in the manner of supervision and regulation. Fargo is the only city in the state that has taken a forward movement in this respect. They have a meat ordinance "To regulate the sale of meats, poultry, fish and other provisions and to provide for the inspection of the same and of slaughter houses, meat markets, premises and vehicles from which meat, poultry, fish and other provisions are sold and delivered from and to prohibit the sale of diseased, unwholesome, putrid or adulterated meats, poultry and other provisions."

Fargo is to be commended on this advanced step for the protection of its citizens. Until we procure state legislation, I would recommend that other cities pass similar ordinances with special reference to the inspection and control of slaughter houses.

DEFECTS IN SIGHT AND HEARING.

Much good work has been done of late years for the recognition and correction of those conditions characterized by defects of sight or hearing in pupils attending our public schools. It has been found on making physical examinations of large numbers of what is generally classed as "dull" pupils that a great proportion of them are defective in either sight or hearing or both. It has also been found that when these defects are corrected or in other words when their handicap is removed that they become in numerous instances the brightest pupils in the school. In bulletin number three (3) prepared by a leading specialist of the state and issued by this department the matter was emphasized. Last winter a further effort was made to interest the people in this cause and the following circular letter was sent to each county superintendent of schools in the state.

Grand Forks, N. Dak., Dec. 10, 1908.

DEAR SIR: From time to time, attention has been directed by this department to the prevalence of visual defects in the eyes of school children and to the necessity for early recognition of the conditions with suggestions as to how they should be remedied. In the larger cities of the east where

examinations are regularly conducted and the results systematically tabulated, it has been found that a very large per cent of the pupils have some defect of vision. Observations in the west have practically duplicated these findings. It can readily be seen that those defects place a great handicap on the progress of the pupil and when it is understood that the great majority of these defects are easily detected and corrected, the importance of attending to them becomes more apparent. In city schools it is becoming customary to have physical examinations made of all pupils at stated intervals and have results recorded. Where defects are found they are reported to the parents with suggestions, etc. In our newer west, however, the fact remains that if anything is to be done at all it must be done by the teacher. With the practical charts and test types that can be procured for a mere trifle any teacher with a little study and practice can make a fairly intelligent and satisfactory examination. I would suggest that you give this movement your hearty co-operation by seeing that your schools are supplied with charts and test types and that your teachers are instructed in their use. Let no defect that may interfere with a child's chance of obtaining a normal education be left unrecognized and unobserved.

Yours very truly,

J. GRASSICK, M. D.

From the numerous inquiries and applications for test charts that have been received at this office since that time, I am of the opinion that the agitation has done something towards arousing public sentiment to a just conception of this very important subject. Testing a child's physical condition at the beginning of the school year before enrollment would seem to be just as important as ascertaining the extent of his mental equipment. When we consider how largely the latter is dependent on the former we wonder how this "plain duty" has been so long neglected.

SMALLPOX.

Smallpox continues to be more or less prevalent in this and surrounding states. There have been reported from this state for the biennial period 1,149 cases with seven deaths. The question of its control is one that has engaged the attention of the civilized world for centuries. To Dr. Jenner is due the credit of its solution. The degree of immunity of an individual or a people is in direct proportion to the thoroughness with which the principle of vaccination has been adopted. The experience of centuries has demonstrated that successful vaccination grants freedom from the disease and that it has never gained a foothold in a community or country where its population has observed this precaution. Science knows of no other way by which it can be prevented or controlled. The large number of cases that have occurred is conclusive evidence that vaccination has not been general in our state. There has been a degree of confidence placed in quarantining that is out of proportion to its efficacy. Experience has demonstrated that it is unsatisfactory and misleading. With the view of getting the sentiment of our health officers on this matter, I sent to each county and city health officer in the state the following circular letter:

DEAR DOCTOR: The advisability of removing smallpox from the list of diseases subject to quarantine has been under consideration for some time and the board would like to have an expression of your views on the subject. We are personally of the opinion that the present system of controlling smallpox by means of quarantining is expensive, misleading and far from being satisfactory.

Any suggestions you may offer will be duly considered.

Yours very truly,

DR. J. GRASSICK,
Secretary State Board of Health.

The answers received showed that sentiment was so divided that for the present at least it would be useless to adopt any such provisions, with the hope of a reasonable degree of success.

The experience of our neighboring state Minnesota on this same question will be watched with much interest. Something looking toward compulsory vaccination appears to me to be what we require.

We have endeavored to have health officers throughout the state establish and maintain quarantine in all cases of smallpox that come under their notice and have advised wholesale vaccination of all parties exposed to contagion. In one instance it was necessary to call on the civil authorities to enforce this order. But, notwithstanding all this care the disease each year has its full quota. Many cases are so mild that they escaped detection and thus it is propagated and spread. In my opinion it will continue to be more or less prevalent until we are as a community rendered immune by vaccination.

TUBERCULOSIS.

'Consumption still continues to be "The captain of the hosts of death." It is responsible for more deaths and a greater economic loss than that of any other disease. In comparison with it all other social problems of a medical character sink into insignificance. In the United States 200,000 lives a year are sacrificed on its altar while the whole world counts its victims at a million a year. In our state of North Dakota one death in every ten, excluding stillbirths and those who died from violence, is due to it. At this rate, assuming our population to be 500,000 there will die of tuberculosis in our state 50,000 of those now living. This is a fearful tribute to pay to a disease that is generally acknowledged to be preventable! The value of human life cannot be measured in dollars and cents, but estimate the economic loss from tuberculosis as conservatively as we may, we are at once struck with amazement at its enormity. Some idea of the comparative magnitude of our loss may be obtained when we recall that in the four years of our Civil war we lost from wounds received in battle 205,070 men, only about as many as are sacrificed each year to consumption! On decoration day we pay grateful homage to our warrior patriots but we forget that we lay to rest every year nearly as great an army who were slain in their fight against the Great White Plague. The more intelligent portion of the civilized world is now engaged in a crusade against it. International

agencies are marshalled in the contest, state and municipal machinery is being organized, medical men collectively and individually are enlisting and the lay press representing the masses of the people is taking up the fight. A general advance is noted all along the line. As a result of this assault, embracing an exhaustive study of the life history of the germ that is responsible for the disease, coupled with practical applications of ascertained scientific truths, certain definite well defined principles have been deduced, proven to be efficacious in its management and control. The following may be set down as demonstrated facts: That tuberculosis is preventable; and, that it is readily curable in its earlier stages and amenable to treatment in its later stages.

As there is still a woeful and widespread ignorance among the masses on both of those propositions it would seem to be the duty of those in authority to see to it that they be properly instructed as to the former and intelligently directed as to the latter.

This problem is not one that falls exclusively to any one class or profession, it is the peoples problem, and success can be reached only by combined efforts of all intelligent people. Literature, lectures, demonstrations, exhibitions, each have their place and do their part in the general plan of educating the people. This department in conjunction with Public Health Laboratory have in preparation the material for an exhibit showing in graphic form the cause, prevention and cure of tuberculosis. This to be supplemented by lectures and to be presented as a public demonstration of the subject in various parts of the state. This plan has given good results in some of the older states where it has been tried.

Another matter that has been fully demonstrated is the efficacy of the sanitarium form of treatment. Its benefits are three-fold: First. It places the patient under the best possible condition for cure and gives him advantage of all those means and methods that science has demonstrated to be of material benefit in the treatment of the disease. Second. It places the patient in a position where he cannot infect those by whom he is immediately surrounded and thus the health of the community is protected. Third. The patient is taught those principles of personal care and hygiene which underlie the whole fabric of cure; and, when he is so far recovered as to be able to return to his home he becomes a missionary and an object lesson of correct methods of living to everyone with whom he comes in contact. As illustrative of what has been accomplished we may be permitted to quote the following: In the past fifteen years Maine has reduced her death rate from this source 38.2 per cent; New Hampshire, 31 per cent; Massachusetts, 39.9 per cent; Rhode Island, 17.8 per cent; Connecticut, 15.6 per cent; England and Wales, 29.9 per cent. It is now generally conceded that these results have been attained by educating the public in the real nature of the disease coupled with demonstrations of the best methods known to science

by which it can be combatted; and by the erection and maintenance of sanatoria; primarily, for the care of tuberculosis cases and secondly, as object lessons and centers of instruction for the dissemination of reliable, practical knowledge in regard to the infectiousness, preventability and curability of the disease.

In the light of this experience, I cannot do other than recommend that the next legislature be asked to pass a law making it mandatory for the attending physicians to report to the state health department all cases of tuberculosis coming within their knowledge to the end that the parties so infected may be supplied with suitable and reliable information relative to the best approved methods for the cure of the disease and of the precautions necessary to take in order to avoid transmitting the disease to others; and, that suitable and sufficient sanatoria be established and maintained at some proper and desirable location within the state, and at its expense, where approved and up-to-date methods may be employed for the relief and cure of those who may be admitted for care and treatment.

DIPHTHERIA.

Diphtheria still continues to be one of the most prevalent of our infectious diseases. During the biennial period there were 810 cases reported with 101 deaths. This gives a death rate of about 12 1-2 per cent. This rate, doubtless, could be materially reduced by early detection of individual cases, strict quarantine and a liberal and early use of antitoxine. During the winter season in some of our western counties it becomes epidemic. Among some classes of the foreign population they look upon it along with some other disease of a similar nature as being divine in origin and sent for a good purpose. Under these adverse conditions it often becomes a serious problem for the health officer to face. As the people become better informed however, better ideas supplant the old ones and the work of controlling those cases are very much lightened. Much work has yet to be done along these lines before conditions are to be considered as approaching the ideal. The work of the public health laboratory has been of great service to the people in clearing up diagnoses in doubtful cases and thus checking the spread of the disease. There have been examined in the laboratory during the past year a total of 787 specimens of throat cultures. This opportunity of having scientific examinations made is being appreciated more and more by the physicians throughout the state. I would strongly urge upon those directly interested to avail themselves of the benefits to be derived from this method of positive diagnosis, the more especially as it is to be had for the asking "without money and without price." For more detailed information as to the work done by the public health laboratory I would respectfully direct your attention to the special report of Dr. Ruedliger, director, contained in another part of this report.

VITAL STATISTICS.

The last legislature passed Senate Bill 222 creating a Bureau of Vital Statistics. This made an entire revolution in the manner of collecting and reporting births and deaths.

The system heretofore in force in which all reports were supposed to be made to the county health officer and by the county health officer to the state health officer was found to be a failure wherever it was tried. The Bureau of the Census, Washington, D. C., after careful consideration prepared a standard form which has been adopted by many of the states. Our North Dakota law is framed after this model. The importance of complete, accurate and uniform records of births and deaths have long been recognized by statisticians and students of sociological problems as well as by those directly interested in the cause, classification and cure of disease. That people generally do not so fully appreciate the value of such records is amply demonstrated by reference to past returns. The registration of its birth is a valuable inheritance to which every child is entitled and some of its most valued rights and privileges may be placed in jeopardy or entirely lost if this is neglected. Upon death records may hang very weighty problems of inheritance or litigation. As our country grows older these will increase in importance. It devolves upon the state therefore to devise methods by which the interests of its dependents may be protected.

The bill, a copy of which you will find elsewhere in this report is the outcome of this demand. It complies with the requirements of the national bureau of the census and has been adopted by the leading states of the Union. We are thus in a fair way to be recognized as a registration state. It is to be regretted that the bill carried with it no appropriation for putting it into effect and it was thought at one time that it would have to go by default. The state officials having control of the emergency fund were appealed to for aid but it was found impracticable to get any help from that source. After considering the matter carefully pro and con, it was decided to draw on the appropriation for the current expenses of the Board, for the necessary amount. This necessitated the strictest economy all around and the cutting out of some lines of work that our appropriation might not be overdrawn.

The following blanks were procured and a supply distributed to each of the one thousand and fifty-six (1056) local registrars, five hundred and fifty (550) physicians and midwives, and one hundred and fifty (150) undertakers:

Form No. 1, 40,000 Cert. of Deaths.

Form No. 2, 80,000 Cert. of Births.

Form No. 3, 80,000 Cert. of Births Supplemental.

Form No. 6, 40,000 Burial Permits.

Form No. 7, 2,000 Vital Statistic Laws Stitched.

Form No. 10, 16,000 Monthly Statement Cards.

With each package was enclosed the following circular letter:

Grand Forks, N. Dak., January 20, 1908.

DEAR SIR: You are doubtless aware that the legislature at its last session enacted a new Vital Statistic Law, a copy of which I enclose for your information and guidance. I would suggest that you read it over carefully that you may become acquainted with its provisions and requirements. Send me the names and addresses of each doctor and midwife in your jurisdiction and I will forward them copies for reference. I send you herewith a set of blanks for use in your office. Study them in connection with the law and become familiar with their use. At the close of your term of office, turn them over to your successor. See that every report is properly made out in black ink and mailed on the 5th day of each month to the state registrar. I would ask city and village clerks who have old books of record, to use the same for keeping a copy of births and deaths for file in their office as required by law. New record books will be supplied as soon as procured. In all cases send the original certificates correctly and completely filled out to this office. You will be entitled to 25 cents for each birth and death certificate properly and completely made out, registered and returned to the state registrar, or, for a card used for that purpose when no births or deaths have occurred.

The correct registration of its birth is a valuable inheritance to which every child is entitled and, which is in the power of every municipality to bestow. It is only by hearty co-operation of the local registrars with the state registrar that anything like complete returns can be made possible. I feel confident that you will see that your jurisdiction will be well represented. The following diseases are to be considered infectious, contagious, or communicable and dangerous to the public health, namely: Smallpox, diphtheria, scarlet fever, measles, whooping cough, bubonic plague, yellow fever, typhoid fever, erysipelas, glanders, anthrax and leprosy. When death occurs from any such diseases proper precautions should be taken to prevent their spread.

Bespeaking your hearty co-operation in this matter, I am,

Yours respectfully,

J. GRASSICK, M. D.,
State Registrar.

When you take into consideration the fact that a separate account had to be opened and kept for each local registrar throughout the state—that they are required to report monthly—that the reports they send in have to be tabulated, filed and indexed—that a verified statement of the number of registrations made has to be sent to each of them at the end of the year—that letters have to be written, questions answered, and explanations made—some idea may be had of the amount of work involved in putting the new law into operation and in making its provisions reasonably effective. How far we have been successful must be judged by results. A reference to the vital statistic tables in this report with comparison of those in preceding reports may serve to furnish data for a correct analysis of the situation. A recent visit, with inspection of our methods, of Chief Statistician, Cressy L. Wilbur of the Bureau of Census, Washington, D. C., has strengthened my belief that the extra labor involved has been more than justified by the results obtained. It is gratifying to note that there has been a gradual and steady improvement in the registration of Vital Statistics since the

new law went into effect Jan. 1st, 1908. This is shown very clearly in the following summary of births and deaths as registered in this office for the first six months of the present year:

	Jan.	Feb.	Mar.	Apr.	May	June	Total
Births	211	235	549	548	538	628	2,705
Deaths	70	97	213	179	187	243	989

A comparison of the registrations made in the month of June for the past six years will furnish further evidence of the progress that has been made:

	1903	1904	1905	1906	1907	1908
Births	140	254	343	322	325	628
Deaths	27	125	115	106	112	243

By referring to this table it will be seen that the maximum of efficiency under the old County Superintendent system was reached in 1905, no improvement being made in the two following years, although working under the same plan. But the first six months after the new system was introduced the registration of births and deaths have about doubled.

The births recorded in June, 1908, being 83 per cent higher than that recorded in any former month while the registration of deaths shows 94 per cent of an increase over any previous record. We may therefore justly assume that at an early date North Dakota will have as complete registration statistics of its births and deaths as that of any state in the Union.

MILK INSPECTION.

The importance of milk as an article of diet can hardly be overestimated. In the early years of our life our very existence is dependent on its use, while in later years it enters largely into nearly every meal that we take. Although it has all the elements in it of an ideal food it has probably been the cause of more disease and death than that of any product we use. It is an excellent culture medium, under favorable conditions, for the growth of many pathogenic organisms and in this lies its chief danger. Some forms of bacteria grow in it with amazing rapidity and in so doing elaborate ptomains that are exceedingly virulent. The great mortality from summer diarrhoeas of infancy has justly been laid at its door, while the milk from infected cows is held responsible for many cases of tuberculosis. When we consider that about one-fourth of all the children born in the civilized world die before they reach their fifth year and that about one-half of all the deaths among infants are due to diarrhoeal disorders, the importance of inspection of our milk supply for adulteration, contamination or infection becomes evident. The wonder is that this matter has not been accorded more general attention. There are but two cities in the state that have in operation milk inspection ordinances—Fargo and Grand Forks. Bismarck has adopted one that will go into effect Sept. 1st, 1908.

The Inspector at Fargo reports as follows: "I have had very little difficulty in enforcing the ordinance. In three years I have tested for tuberculosis 4209 cows and condemned as being tubercular 512; which were disposed of by the owners in different ways. The chemical analysis of the milk is being done by the North Dakota Agricultural College and so far adulterations or preservatives have not been reported."

The Inspector at Grand Forks reports as follows: "The ordinance went into effect Jan. 8, 1907, and, from that time to the present there have been examined for tuberculosis 1272 cows—292 of which were found to be infected and were condemned. Since Jan. 8, 1908, there have been tested 224 samples of milk and cream. The milk, with very few exceptions, came up to the standard of 3 1-2 per cent butter fat; but the cream was in a majority of the tests made, below the standard of 18 per cent as required by our ordinance.

"There have been examined in all 36 dairies; 17 located in the city limits; one is situated seventeen miles from the city, and the remaining 18 within a radius of six miles of the city. The dairies in the city are inspected about six times in the year and sometimes oftener according to conditions in which they are found. The dairy barns in the majority of instances are deficient in light, drainage and ventilation, but the dairy men are, as a rule, courteous and willing to co-operate as far as their means will allow in improving the sanitary conditions of their premises. A vast improvement has been made in the manner of handling the milk since the ordinance went into effect. The few complaints received from consumers of milk and from the dairy men supplying the same leads me to think that the milk ordinance is satisfactory to all concerned. So far as I am able to judge, I believe the City of Grand Forks is getting a fairly pure milk supply."

I append the Grand Forks Milk Ordinance which may be of interest and serve as a model for other cities who are looking to an improvement in their milk supply:

MILK ORDINANCE.

An Ordinance to Provide for the Inspection of Milk, Dairies and Dairy Herds and to License the Sale and Disposition of Milk and Cream in the City of Grand Forks, N. D.

Be It Ordained by the City Council of the City of Grand Forks, North Dakota:

Section 1. That no person shall dispose of milk or cream within the city of Grand Forks to be consumed there without first having obtained a license therefor as hereinafter provided.

Section 2. Any person desiring to secure a license as provided in section 1 shall make application therefor in writing to the health officer of the city, setting forth therein their place of residence, the number of cows in his herd, or the name and place of residence of the person or persons from whom he desires to obtain his milk or cream.

Section 3. The filing of the application provided for in the next preceding section shall authorize the applicant to continue the selling or disposing of milk if he shall at the time of filing said application be engaged in the selling or distribution of milk until the board of health takes action upon and either issues a license to the applicant or refuses to do so.

Section 4. Such applicant shall pay to the city treasurer the following license fee: For five (5) cows or less an annual fee of \$1.00 per head; for all cows above five (5) and up to twenty-five (25), an additional fee of fifty cents (50) per head; for all cows above twenty-five (25) an additional fee of twenty-five cents (25); for all other persons an annual fee of \$5.00. All licenses shall expire on September 1st of each year.

Section 5. It shall be the duty of the board of health to inspect or cause to be inspected the dairy cows of the applicant or the cows of the person or persons from whom the applicant desires to obtain milk or cream, and also the barns and premises where such dairy herd is kept, and all vehicles, receptacles, utensils and other instruments used in handling the milk or cream that may be sold under license as herein provided.

Section 6. No fees shall be charged for such inspection of cows, excepting where it be had without the city of Grand Forks. In such case the applicant for the license shall pay the actual expenses incurred by the board of health.

Section 7. Upon the report of the health officer showing compliance by the applicant with all the terms and provisions of this ordinance in respect to such dairy cows and the milk and cream produced therefrom and the premises and instrumentalities used in connection with such dairy, and upon the presentation by the applicant of a receipt showing the payment of the license fee required to the said city treasurer, the board of health shall thereupon issue said applicant a license as herein provided.

Section 8. The board of health shall have supervision and control of licenses and regulation of the sale of milk or cream and the inspection of dairies and dairy herds under the provisions of this ordinance, and they shall have the authority to appoint such inspectors and assistants as they may require in carrying out and enforcing the provisions and terms of this ordinance.

Section 9. In order to carry out the provisions and purposes of this ordinance, the health officer and all inspectors and assistants appointed by the board of health, shall have the right at any time to enter upon the premises of any person licensed under the provisions of this ordinance to examine or inspect the dairy or dairy herd and milk or cream of such licensee. Any refusal on the part of the licensee to permit such inspection and examination as herein provided shall subject his license to immediate revocation.

Section 10. The health officer and inspectors shall have authority to stop and inspect any vehicle used in delivering milk or cream, or to inspect any place where milk or cream is sold or to appropriate a reasonable amount of milk or cream for the purpose of enforcing the provisions of this ordinance.

Section 11. Each licensee shall cause the number of his license to be conspicuously placed on all vehicles used by him in the sale or distribution of milk or cream within the limits of the city of Grand Forks, and all licensees who sell milk or cream from vending places shall keep the licenses posted in a conspicuous place upon the wall of such vending place.

Section 12. No person shall sell or dispense any unclean or adulterated milk or cream and no person shall keep animals for the production of milk or cream for sale or distribution within this city in an over-crowded condition, or in barns which are not properly ventilated and lighted, or which are in an unclean condition from any cause, nor shall any person draw or suffer to be drawn milk from animals who are themselves in an unclean condition, or from animals which are diseased, or from animals fed on unwholesome food or water, nor shall any person keep any milk or cream intended for sale or distribution in unclean vessels, nor in any

unclean building or in any room used as a sleeping apartment, or for any other purpose incompatible with the proper preservation of the cleanliness of the milk or cream or of the vessels wherein it is kept, and all milk or cream thus kept or produced is hereby declared to be unclean.

Section 13. The words "adulterated milk" as used in this ordinance means all milk containing less than thirteen per cent solids, all milk containing less than three and a half per cent of butter fat, or milk drawn from animals fifteen (15) days before, or five (5) days after parturition, and all milk in which has been added any foreign substance.

Section 14. The words "adulterated cream," as used in this ordinance, means all cream containing less than 18 per cent of butter fat and all cream to which has been added any foreign substance whatever.

Section 15. No person shall sell or dispense milk or cream drawn from cows which has not been tested for tuberculosis by said inspector, using what is known as the tuberculin test. Each cow found healthy shall be marked with a tag, which shall indicate whether such animal is sound and fit for dairly purposes. No cow which is found to be tuberculous by said tuberculin test shall be used to supply milk or cream to be sold or dispensed in this city.

Section 16. Any person violating any of the provisions of this ordinance shall be punished upon conviction by a fine of not less than \$5.00 or more than \$50.00, or by imprisonment of not less than five days or more than thirty days, and his license shall thereupon be subject to forfeiture.

Section 17. This ordinance shall take effect and be in force from and after its passage and publication.

FIRST ANNUAL REPORT OF THE PUBLIC HEALTH LABORATORY

In accordance with an act of the Tenth Legislative Assembly there was established a Public Health Laboratory at the State University of North Dakota located at Grand Forks. The Legislature appropriated a sum of money for the equipment and maintenance of said laboratory, the function of which laboratory shall be "to make bacteriological examinations of bodily excretions, waters and foods; and make preparations and examinations of pathological tissues submitted by the state superintendent of public health, or by any county superintendent of public health, or by any regularly licensed physician of North Dakota."

The work of the laboratory, as outlined by the director, is as follows:

1. Bacteriological examinations of throat cultures, for the diagnosis of diphtheria; or to determine whether the germs are absent from the throat after the patient has been in quarantine for some time and has apparently recovered.

2. Microscopic examinations of sputum, for the diagnosis of consumption.

3. Blood test for diagnosis of typhoid fever, when the symptoms are atypical and masked.

4. Bacteriological and chemical examinations of drinking water, especially for the purpose of determining whether or not the water is the cause of an outbreak of typhoid fever, and to determine whether a certain water is safe for drinking purposes.

5. Microscopic examination and diagnosis of pathological tissues removed at operation. This examination is made to determine if the tissue is from a malignant cancer or from a less dangerous tumor.

6. Microscopic examinations of dogs' brains for the diagnosis of rabies.

7. Examination of urine and stomach contents.

8. Microscopic examinations of purulent discharges from the eyes, urethra or vagina for the presence of gonococci.

The laboratory was opened for work on July 1st, 1907, and steps were taken immediately toward procuring the necessary laboratory equipment and providing receptacles for the collection and transmission of specimens for examination. Early in August, 1907, a

letter circular was sent to every physician of North Dakota announcing the fact that the laboratory is prepared to make the various forms of laboratory diagnosis outlined above, free of charge, and also calling attention to the fact that the receptacles for collecting and sending specimens are ready for distribution. These receptacles comprise the following four outfits:

1. Diphtheria outfits which are composed of an ordinary paper mache mailing tube, six inches long by one and three-fourths inches in diameter, inside of which is placed a tin can of proper size and good construction. Inside of the tin can are placed a test tube containing sterile, coagulated blood serum, and another tube containing a sterile cotton swab on a wire. Accompanying each outfit is a data card calling for certain information from the doctor, and on the reverse side for the results of the laboratory examinations.

2. Tuberculosis outfits which are composed of a heavy paper mache tube four inches long by two inches in diameter and containing a heavy vial in which is placed a small quantity of carbolic acid to disinfect the sputum which is deposited in it. A data card is placed in each outfit.

3. Typhoid fever outfits consist of a piece of aluminum foil, two inches square, and data card. These are placed in an envelope upon which are printed directions for collecting blood for the test.

4. Pus and blood outfits consisting of two clean glass slides placed in a slide-mailing case to prevent breakage, two small sterile swabs in a small sealed envelope, and a data card. These outfits cannot be bought on the market, ready for distribution, but must be put up at the laboratory, under the supervision of a trained bacteriologist. About 3,500 of these receptacles were sent out to 193 physicians in different parts of the state, between September 5, 1907, and June 30, 1908. No charge is made for these outfits.

During the year ending June 30, 1908, we have examined at the laboratory, and given reports on 1,828 bacteriological and pathological specimens from all over the state. 787 of these were throat cultures to be examined for diphtheria bacilli. Of this number of throat cultures 379 were for release and 408 for diagnosis. 179 of the last mentioned lot were found to contain diphtheria bacilli and 229 did not contain them. There were 454 specimens of sputum examined for tubercle bacilli, 116 of which were positive. 190 specimens of blood were tested for typhoid reaction, 74 of which gave a positive reaction. 120 of the specimens were pieces of tissue which had been removed at operation. These tissues were examined to determine if they are from a malignant cancer or from one of the less dangerous tumors. In addition to these we examined 74 specimens of pus to identify the infecting microorganisms; 40 specimens of water, 50 specimens of urine, 10 specimens of stomach contents and 8 dogs' heads, which were examined for rabies. The remainder were specimens of blood, faeces, milk and cream. All

reports are sent by mail but when the case is urgent telegraphic or telephone reports precede the mail reports.

The specimens came from nearly every county in the state as is shown by the following table:

TABLE SHOWING THE NUMBER OF SPECIMENS WHICH WERE RECEIVED
AND EXAMINED FROM EACH COUNTY IN THE STATE.

County.	No. of Specimens
Adams	0
Barnes	40
Benson	27
Billings	0
Bottineau	57
Bowman	0
Burleigh	82
Cass	28
Cavalier	18
Dickey	10
Dunn	1
Eddy	3
Emmons	2
Foster	23
Grand Forks	410
Griggs	55
Hettinger	7
Kidder	0
LaMoure	29
Logan	0
McHenry	45
McIntosh	0
McKenzie	0
McLean	9
Mercer	0
Morton	16
Nelson	25
Oliver	0
Pembina	23
Pierce	24
Ramsey	49
Ransom	61
Richland	84
Rölette	14
Sargent	19
Stark	13
Steele	1
Stutsman	350
Towner	6

Traill	44
Walsh	46
Ward	115
Wells	114
Williams	34
Wallace	1
Standing Rock Indian Reservation	0
Unclassified	34
Minnesota	5
South Dakota	3
Montana	2
<hr/>	
Total	1828

SANITARY WATER ANALYSIS.

Most of the water examinations made were bacteriological in character but eight chemical examinations were made for us by Profesor Babcock of the University of North Dakota. The laboratory accepts water for chemical analysis to determine whether or not it is suitable for a drinking water but at present these determinations are made for us by Professor Babcock. The laboratory pays him the nominal sum of \$5.00 an examination for this work.

When pollution is suspected and an analysis is desired physicians are requested to write to the laboratory for a container and instructions for collecting and sending the water. We have on hand a few zinc-lined boxes, large enough for a piece of ice and containing a sterile bottle and a clean Mason fruit jar. These containers may be had for the sending of water, but must be returned promptly as we have only a small supply of them on hand.

We will not examine specimens of water that are not submitted in our containers, packed in ice, because a reliable examination cannot be made unless the water is properly collected and submitted to the laboratory.

GUSTAVE F. RUEDIGER, M. D.

Director of the Public Health Laboratory, University of North Dakota.

BULLETINS

Reform in any true sense must be preceded by an intelligent comprehension of the subject. In matters of public health old worn out theories have to be cast aside and demonstrated facts put in their place. This takes time, energy, talent and money. How to reach the masses with the limited means at our disposal has been a serious question. We have from time to time prepared and issued bulletins on subjects that are of vital interest to the public. These we have endeavored to prepare in a reliable manner as free as possible from vague technicalities. Over one hundred of the leading newspapers of the state have kindly published them as soon as they have been issued. In this way we have succeeded in reaching the people, and from the manner in which they have been received I am of the opinion that they have in a measure, at least fulfilled their mission. A few of the subjects treated are as follows:

1. Fresh air.
2. Tuberculosis.
3. Hygiene of the eye and ear.
4. Ventilation.
5. Infant feeding and its relation to the summer diarrhoeas of children.
6. Cleaning up.
7. The house fly.
8. Typhoid fever.
9. Spitting.
10. The Problem of pure ice.
11. The public slaughter house.
12. Vital statistics.

The first two of the list were prepared by my predecessor, the third by a specialist of the state and the rest by the present incumbent of the office. A copy of each is given in the body of this report. As soon as the funds at our disposal will warrant the out-lay we have in mind the issuing of a bulletin in pamphlet form, of a thousand or more copies monthly, and mailed to newspapers, doctors, health officers, registrars, etc.; giving a resume of public health matters, vital statistics, etc. It would serve as a means of keeping the department in direct touch with the people and of disseminating useful sanitary literature to the masses.

FRESH AIR.

At this season of the year the question of fresh air and good ventilation is an extremely important one especially in cold climates

like North Dakota, for the reason that when the thermometer registers very low, it is hard to heat a building. It is therefore customary to put the storm windows on and make the building as tight as possible. Many put on storm windows without ventilators. Many more have ventilators which are too small to let in a sufficient amount of fresh air, even if open all the time. It is calculated that three thousand cubic feet of air is required by each adult person every hour in order to be in perfect health. The great majority of people do not get anywhere near that amount during the winter months; therefore colds, la grippe, pneumonia, bronchitis and consumption are very prevalent. Many more emerge in the spring very much devitalized (run down).

Crowded rooms should be avoided unless an abundance of fresh air is supplied. Under this head comes many places such as churches, theatres and others of public meetings. I have been in many of these in which the air became positively abominable before the meeting was over. If one has breathed highly polluted atmosphere in a room of that sort for some hours he is quite likely to catch a so-called "cold" when he leaves the building. In most instances these colds are in reality due to dust which is contaminated with disease germs which find lodgement in the upper respiratory passages. If the individual is in perfect health it may do him no harm, but, if he receives a severe chill upon leaving the building a favorable opportunity is given for the disease germs to multiply and produce a "cold." The same is true of many other diseases such as la grippe, pneumonia, tuberculosis, etc.

The sleeping room should not only be well ventilated, but rather cool. Our forefathers slept in cold rooms, perhaps heated a little on going to bed, or arising in the morning, by a small fire in the grate. These fireplaces were excellent ventilators. On the other hand the ordinary stove has very little value, if any, as a ventilator. The ordinary kerosene heater is an abomination, and should not be tolerated under any circumstances as all of the poisonous products of combustion are thrown directly into the atmosphere we breathe. Above all things they should never be used in a sick room. In one instance, I called upon a patient in a small room which was heated by a kerosene heater. The room was so tightly closed that I almost staggered upon taking my first breath of the atmosphere. The oxygen of the room was so nearly exhausted that there was just a small, yellow flame, in fact, it was scarcely burning. As soon as the air rushed into the room, the flame burned up brightly. The patient in this case was almost in a stupor, but strange to say did not realize that there was anything the matter with the atmosphere. Very large kerosene lamps are sometimes used for heating, of course with bad effects upon the atmosphere. Gasoline stoves, and even gas ranges should not be used in the winter time unless provided with a vent

in connection with the chimney for carrying off products of combustion.

If the proper amount of fresh air was furnished, and if we did not live in too close an warm an atmosphere, we should be just as robust and as free from disease in North Dakota as in any other state in the Union for the reason that we do not have sudden changes of temperature and atmospherical conditions. 'Many people believe that when one has lung trouble they must be protected from the cold, fresh air. Nothing could be more erroneous.' The fact is that they need more fresh air than a well person. Even cold air is not harmful. If the individual has pneumonia or consumption, and a part of the lung is out of commission, the part that is well must necessarily work enough harder to make up for the part in which the air does not enter. If, on top of this, the atmosphere is extremely foul, and loaded with poisons which have been breathed off, we further embarrass the lung and render the chances of recovery very much less. Most people now understand that consumption can be cured by fresh air alone; but to do this even a well ventilated room is not sufficient. They must practically breathe out-of-door air all the time. This is why we send our well-to-do patients to the southern climate where they can practically sleep out of doors without being cold. It is, however, perfectly possible to treat such cases in this state. One plan for doing this is to arrange a hood or awning on the inside of the window, into which a gate is constructed. This hood, or awning, fits closely over the head of the patient as he sleeps at night, or rests in the day time. While the patient is sleeping in the house he is breathing out-of-door air as he lies with his head within the hood which is abundantly supplied with fresh air through the gate in the window. There is usually a window of mica fitted into this hood through which the patient can see into or be seen from the room.

TUBERCULOSIS.

Tuberculosis is an infectious disease caused by the introduction of the tubercular bacillus into some part of the body. This may be brought about by breathing directly into the lungs particles of dried sputum from other consumptives, by kissing consumptives or using any vessel, such as a drinking cup, in common, with a consumptive. It may also be caused by taking consumptive germs into the stomach through foods, such as milk. It is occasionally produced by introducing the germs through an abrasion of the skin. The disease is much more prevalent than is commonly supposed. In North Dakota, excluding deaths from accidents, consumption is responsible for about one out of seven deaths from all other diseases.

Tuberculosis is not necessarily a fatal disease, in fact, many recover from it who never knew they had it. The most essential point in the treatment of the disease is in the making of an early diagnosis. By this I mean long before a person has fever and night sweats and

great loss of weight or spitting of blood. The next point is that the individual be informed as to the true nature of his malady and given specific directions as to how to take care of himself. One of our best authorities states that fully ninety per cent of the very early cases are curable, so that I would urge upon anyone who has a cough which does not readily respond to ordinary treatment, to lose no time in consulting his physician. The treatment is more of a matter of hygienic conditions than medicine. In fact, many of the so-called "patent" medicines are positively harmful and should be shunned. Some of these medicines contain a large amount of alcohol and make the patients feel better for awhile. Others contain sedatives, which, in a measure, alleviate the cough, thus making the patient believe he is improving, when in fact, the disease is steadily advancing, and every day's delay reduces the chances of the patients ultimate recovery. As an abundance of fresh air is a large element in the treatment, it is perhaps advisable for those patients to whom expense is no great consideration to spend the winter months at least in a warm climate where they can sleep out of doors all the time. It is, however, perfectly possible to treat such cases in this climate and it is much better for a poor man to stay at home where he can secure the ordinary comforts of life and be among friends than to go among strangers and have to practice rigid economy.

If a case of tuberculosis has occurred in a family, every other member of that family should take the best possible care of himself for years afterwards. In fact, they should be under the constant supervision of their physician so that if the disease does occur, it may be treated in its incipency. No one should sleep in the room with a consumptive, certainly not in the same bed. A consumptive should never dispose of his sputum in any way which might allow it to become dried and inhaled by others as particles of dust. For instance, he should never use a handkerchief, never spit on the floor, should not cough in the face of another nor set at the table. Consumptives should not prepare food for others. Consumptives should expectorate into an approved spit cup of which many are on the market, into an ordinary spittoon partly filled with a disinfecting solution and frequently emptied, or into pieces of paper which are immediately burned or dropped into a bag and burned later.

The fact is, that the habit of spitting wherever it is most convenient is practically the only method of transmitting tuberculosis, so that if we would give up this filthy practice the disease would soon very greatly diminish and probably become almost extinct.

HYGIENE OF THE EYE AND EAR.

While there has been a certain amount of attention given to the condition of the eyes and ears of the children of the public schools in our state, there has been a lack of appreciation and vigilance on the part of school boards, teachers and county superintendents to

carry out assiduously the efforts made by the state board of health, in so far as the laws of North Dakota allow.

It is rather for the sake of recapitulation than to bring out a new subject that this article is to be published. It is a fact that the importance of examining the school children for eye and ear defects has spread far and wide, and many of the eastern states have enacted laws which make it compulsory from year to year, and it is with just pride that the legislature of our sister state, Minnesota, has given consideration to the Timberlake bill, house file 589, requiring the examination of eyes and ears once a year, in September, and do doubt it will become a law in Minnesota. With simplified methods of examination, which can be carried out by any intelligent and conscientious teacher, many parents will be notified that their children are physically unable to carry on the work not because of mental dullness, but because of defects in hearing or eyesight.

It is indeed pitiable to think of the hundreds of children with defective eyesight, scolded for their stupidity or, suffering from headaches and eyestrain, abused in many ways on account of their infirmities, because no one has really taken the pains to discover the nature of their trouble.

There is perhaps no truer application of the old adage that "a stitch in time saves nine" than when we consider the diseases which are prone to attack the eyes and ears of adolescents. Children acquire their eye or ear troubles in the majority of cases during the first fifteen years of their lives and it has been demonstrated in so many instances that it is hardly necessary to mention it. Early attention in such cases has generally saved them from ultimate blindness and deafness. The truant class is largely recruited from the scholars suffering such defects and from the records of the institutions such as reformatory schools and others, it is found that the large percentage of criminals suffer largely from one or both of these afflictions.

Realizing these facts and reaping our information from statistics worthy of our observation, no greater appeal should be needed for the fond parent than to carry out the warning brought about by the teachers' investigation. The states of Massachusetts, Connecticut, Pennsylvania and Vermont have gone so far in their methods to protect these afflicted children, that they have requested a card from the physicians who have cared for the child, satisfying the teacher that the child had been considered free from his afflictions and had received proper treatment for the same.

It would be entering upon a wide field to discuss at any length the different abnormal conditions of the eye which can afflict the scholar and yet elude the parent. The fact that a child cannot answer the standard tests should be enough to satisfy the parent the necessity of a medical examination, thereby ascertaining without question whether it was due to passing dangerous conditions.

It is true that our most watchful fathers and mothers are on the lookout for such abnormal conditions and would not tolerate a headache or eyeache, dizziness, a sense of strain in the eyes, or a feeling of mental confusion, double vision, etc., in one of their children, very long, without giving it due consideration, and it is for the great majority that this timely warning is given.

Statistics of different countries where Germany probably excels all others, show that 75 per cent of the scholars in some schools were found to be suffering from eye defects alone, could be gone over and entered into minutely to convince our reader, but such is not necessary.

Suffice to say that with our close application to school work, our many new occupations requiring keen and constant eyesight, the number of afflicted eyes is greatly on the increase and if conditions found in the new born are not checked at an early period or in a proper manner the coming generations are bound to suffer from all the symptoms arising from these conditions and leave us a race with impaired eyesight such as Germany is composed of today.

While in infancy and early childhood the predominant abnormal condition is, no doubt, the want of proper focusing of the rays of the eye, making the child either farsighted, astigmatic, or both, many eyes during the early years of school life pass from that condition into the more dreaded than either of the former two, although it may be free from many unpleasant and decided symptoms, namely; nearsightedness. The nearsighted child sees nothing distinctly at a point further than the length of his arm; in the schoolroom he is helpless, for he cannot see the blackboard nor maps unless seated close to them. To the casual observer, teacher or schoolmate he appears dull, inattentive or stupid. The mental evolution of a child suffering from nearsightedness is instructive indeed. Unable to see what his companions see, jeered at by his fellows for his failures, he retires within himself and seeks recreation in play and occupation at close range. He becomes introspective and perhaps perverted in his tastes and self-consciousness becomes one of his mental attributes. Though he may be superior in his knowledge to his fellows, his mentality is often a mere precocity. Correct such defects and you open before him a new world. He plays as his schoolmates, his ambitions are aroused to do as others do and no more doubts are cast upon his mental condition.

On the other hand walk into the schoolrooms, glance from row to row and from seat to seat, count the number of scholars who, with mouths open, not from mere astonishment but from imperfect nose and throat conditions, are breathing pure and impure air through their mouths, rather than through their noses as the creator intended them to do. Their mental capacity and ability is proportionate, in many instances to the size of the gape. A certain number of those you will find upon inquiry, have, or have had, running ears, are

either deaf now or have been more or less so at times, according to the conditions which cause their deafness. Such conditions breed stupidity and mental dullness, too often depicted on such faces, in various degrees.

Is it not time then to become aroused to the destruction waged by the conditions, and is it not our duty as citizens, fathers and mothers and teachers to organize our forces against this invading foe? With the knowledge of these conditions and their dreadful consequences together with care, discipline and vigilance, we shall conquer.

VENTILATION.

It will not be long before we have to face the rigors of another winter, and with it will come problems of vital interest to everyone who resides in the northwest. First, of course, comes the problems of existence. Homes have to be built, food provided, fuel procured, bodies clothed, feet shod, etc. After these are more or less satisfactorily solved it is little wonder that some others of seemingly minor importance should be in a manner overlooked. One of the most essential of these is that of ventilation, because it has to do with the health and welfare of the individual. Its importance has not been fully recognized by the masses. Fresh air is the freest of all gifts and by the very reason of this we are apt to overlook its benefits or fail to appreciate its mission in the economy of health. This is especially true in North Dakota where the severity of the winter weather, makes us so often feel that we are getting to much of a good thing and we set ourselves resolutely at work to keep it out of our homes. We erect our houses with that end in view. We paper and plaster and back plaster and side and double side; we double our doors and windows and felt the joints and stop up every crack or cranny that could by any possibility let in a whiff of God's fresh air. We lock up for the night in as nearly as possible a hermetically sealed box for the purpose of "keeping warm" and having survived the winter, we repeat the process in the summer for "keeping cool." In our newest public buildings, school houses, and assembly halls, we are in a majority of cases making adequate provisions for ventilation, but in the ordinary home, even those that are supposed to be up-to-date and modern, very little attention has been paid to the most important part of the construction. The same may be said in regard to schoolhouses, churches, public halls, etc., in villages and country districts. What does this mean? Simply that we fill our lungs with air charged with oxygen, an interchange takes place and we exhale a vile mixture of carbon dioxide, waste products, effete material, and disease germs. This we do about 1,000 times every hour. An easy calculation will show you how many times you are breathing and rebreathing the same mixture unless provisions are made for a fresh supply of air. You would not think of washing in

the same water that the family and the guests have used and reused in their ablutions; yet this would be hygienic in comparison with inhaling and re-inhaling the poison laden and disease infected atmosphere of an unventilated home. No wonder that thousands of women and children, who are by force of conditions and circumstances compelled to spend most of their time indoors are being slowly poisoned by close rooms and bad air. Slowly and insidiously the work goes on until impoverished constitutions and enfeebled bodies tell the story. Remember that bad air is always a poison whether found in the sanctified atmosphere of a church, the sacred abode of a home, the hillarious precincts of a ball room or the vitiated surroundings of a slum, and any air becomes bad by being breathed over and over again. In making provisions for ventilation an inlet for pure air should be provided. This does not mean necessarily draughts of cold air as too often supposed. The outdoors fresh air as it enters the room should be conducted against a heated surface and warmed by indirect radiation and the foul air from the room should be conducted near the floor level through an exit opening into a heated flue. A chimney with two flues, one for smoke and the other for foul air gives very satisfactory results. The heat from the smoke flue creates a draft in the other and if there is corresponding inlet, circulation will be established and a continual change of air will take place. An open fireplace is one of the best ventilators although not the most economical method of warming an apartment. The above is only suggestive.

Get fresh air by the most approved method that you can, but if you cannot have the best, get fresh air, anyway.

Our brother, the red man, when he lived close to nature and breathed an atmosphere uncontaminated by the germs of the Great White Plague was free from the ravages of consumption but when he adopted civilized habits and forsook his tepee for the modern house he began to suffer and the disease is making such inroads on his vitality that he is fast disappearing from the face of the earth. We, with all our boasted advancement, with a kind of atavism are reverting to the original first principles. So we find the afflicted rich, forsaking their mansions of affluence in this rather rigorous yet invigorating climate for life in the open air "where perpetual summer reigns" and the well-to-do artisan and workman are leaving their comfortable homes and are becoming "dwellers in tents." For it is now generally acknowledged that pure air and lots of it is by all odds the most potent factor we have in combating consumption. To the small number of our people who can avail themselves of this privilege we have nothing to say. But the fact remains that the great masses of those must be treated at home, for it is well known that most of our cases of tuberculosis occur among the middle and poorer classes who cannot afford to change location or climate. And why? Because by reason of their circumstances, the

practice of economy and a lack of knowledge of the fundamental laws of health they pay comparatively little attention to the hygienic conditions which are of so vital importance. There is no purer or better air anywhere than in North Dakota and yet we find people closing it out of their homes by every method possible. We are just beginning to awaken up to the fact that it is possible to turn every home in our land into a sanitarium where by fresh air and correct methods of living we would not only be able to prevent the development of new cases of consumption but also to combat and cure those already contracted. Let it be emphatically stated here that it is not so much a matter of altitude or climate, but AIR, good fresh air, that is needed, and North Dakota in that respect can give you a quality of material that cannot be surpassed anywhere. These northwestern breezes that start at the Pacific coast charged with the iodine of the ocean, kiss in their passage the snow capped peaks of the Rockies, come over the western prairies perfumed with the balm of a thousand flowers in summer and laden with a germ-free breath of healing in winter and bring us a message of health. They give oxygen to the blood and nutrition to the tissues. They calm the unstrung nerves, and tone up the laggard circulation. They give strength to the weak, and the balm of rest to the sleepless. They implant hope in the heart and let the light of truth shine into the soul. Open your homes for them, for in so doing you may be "entertaining angels unawares."

INFANT FEEDING AND ITS RELATION TO THE SUMMER DIARRHOEAS.

We are right in the middle of the season that is so prolific of those gastro intestinal diseases that are commonly known as summer diarrhoeas of infancy. A few words as to their causation and prevention may be of interest and, I trust of some benefit, to the public. About one-fourth of all the children born in the civilized world die before they reach the age of five and about half of all the deaths among infants are due to the diarrhoeal disorders. During the heated season nearly all articles of food are subject to rapid fermentative processes unless kept at a very low temperature. The ingestion of food in which there is the slightest beginning of fermentation is liable to result in gastro intestinal derangement of more or less severity according to the amount taken and extent of changes present in the food. Milk, nature's infant food, is particularly sensitive to fermentative changes. In other words, it is an excellent culture medium for the propagation of germ life. When certain bacteria gain entrance into the milk they multiply rapidly in hot weather and elaborate through the life processes certain highly poisonous substances called ptomains. When these products of decomposition are found they are of such nature that no amount of "doctoring" will make the milk a safe article of diet. When milk is

kept at a temperature of 50 degrees or lower cell life is inhibited and the poison forming bacteria will not develop. All cases of diarrhoea, cholera infantum and such like disorders may be set down therefore as simple cases of poisoning. If we had a single case of strychnine or arsenical poisoning in the community we would drain our treasury if need be to bring the culprit to justice, yet every year we allow the slaughter of the innocents to go on around us with only a few spasmodic efforts made to stem the tide. The children are well worth saving! Don't let us poison them! These facts have been known for many years and we have told and retold them, but it takes time and a long educational process to get the people to appreciate the significance of these and other scientific discoveries and get them applied in every day life. But some progress has been made. During the past fifty years infantile mortality has been reduced fifty per cent and this has mostly been accomplished along sanitary lines and preventive medicine. Those who would be certain of the absence of diarrhoeal poison in milk in hot weather should see to it that the milk is collected by clean persons, in a clean place, in clean receptacles, from clean, healthy cows; then cooled to fifty degrees or lower and kept there until required and then warmed sufficiently for use.

In the matter of infant feeding, cleanliness certainly comes very close to godliness.

When ordinary market milk is used for infant feeding it should be sterilized and kept on ice until ready for use. For those who cannot conveniently consult a physician, the following details from the pen of a hygienist of international reputation, carry the stamp of authority and may be followed with full confidence as to their efficiency.

"Obtain one-half dozen or more nursing bottles with suitable wire hilder kept by druggists. The bottles should be placed in a kettle of soft water, a heaping teaspoonful of the bicarbonate of soda dissolved in the water in order to render it fully alkaline, and then the bottles boiled for half an hour. After being allowed to cool, the bottles are filled with milk, the mouths closed with clean absorbent cotton and the bottles placed in the wire holder are set in a kettle of water, so filled that the water in the kettle is but a little below the level of the milk in the bottles; the water in the kettle is then brought to the boiling point and kept at this temperature for fifteen minutes; then the wire holder with the bottles is kept on ice in the chest until one of the bottles is needed to feed the child. This bottle is warmed by holding it a few minutes in lukewarm water, then the cotton is removed and the rubber nipple drawn over the bottle. Nipples with long rubber tubes should never be used. It is impossible to cleanse them and they have undoubtedly cause the death of many children. Nipples when not in use should be kept in a clean glass jar containing lime water and each nipple should be dipped into boiling water

just before being used on the nursing bottle. When a child has taken its food from a bottle any milk remaining in the bottle should be thrown away and the bottle thoroughly washed and boiled before it is again filled with milk. Enough bottles should be prepared each morning to last the child twenty-four hours, one bottle for each feeding; any milk left over at the end of that time should be thrown away.

Remember: (1) That milk that has already become bad cannot by any means be rendered a fit food for infants. (2) That after sterilization the milk must be kept on ice at a temperature not above fifty degrees F. until needed for the child. (3) That tube nipples must not be used under any circumstances and that nipples must be kept clean and each one dipped into boiling water before being used. The fingers with which the nipples are handled must be kept clean. (4) Should an infant develop a diarrhoea, discontinue the administration of milk in any form and immediately seek the advice of a competent physician."

CLEANING UP.

This is the time of year when cleaning up and keeping clean is in order. During winter, nature is kind to us by not only putting everything that is out of doors in cold storage but in covering from our view objects that would otherwise be offensive to our senses. Now that spring is getting busy, the snows of winter gone, and Jack Frost has loosened his hold on the earth and the accumulated debris of the past season is exposed to view, and becoming unsightly and decaying masses, it behooves us to be up and doing, to make our premises conform to the ideal of beauty and purity. Not only from an aesthetic but also from a sanitary point of view this is important. Garbage piles in a hot North Dakota sun make ideal breeding places for infection carriers, as well as being regular hot-beds for the propagation of the disease germs themselves. Thus in cleaning up you are doing a good service in ridding your premises of multitudes of pestiferous insects, in eliminating possible incubation beds for disease germs, in removing unsightly and unsavory accumulations of filth, as well as doing your duty as a citizen, presenting an object lesson for sanitary reform to others who are not so strongly endowed with a keen civic conscience.

In several cities civic leagues have been formed, which have for their purpose boosting anything and everything of material value of a civic nature. Spokane, Wash., has one of the best of these; it is called the "150,000 Club" because they expect that by 1910 to have that number of members; at present they have 2,400.

The "City Beautiful" committee is one of the numerous committees of the big club, and it is composed of twenty men representing various parts of the city and presided over by a general chairman. A vice-chairman is named for each ward, and from the big club

membership is named captains for each precinct and lieutenants for each block. Thus you can see the City Beautiful committee extends to every portion of the city and each block is thus represented.

Cleaning up plans are made two months in advance. In order to be a success, teams are used to haul away noncombustible rubbish; inflammable rubbish is burned, the mayor issuing a proclamation allowing bon-fires all over the city on cleaning day. The school children are organized for work from various precincts and wards under the general direction of the men in charge of these localities. By this method they have the cooperation of the school children. It is their work that makes it the big success it is. On their last cleaning up day they had 20,000 men, women and children cleaning yards, alleys and vacant lots.

The various sub-committees make plans for improvement and the work is carried out in the various wards through the captains and lieutenants. Public meetings are held from time to time and addresses are made on timely topics, illustrated by lantern slides. A publicity campaign is carried out through the newspapers and there is no difficulty in arousing interest in the work.

What has been done by others can be done by you. In our own state several cities and villages have organized that are working along lines indicated above, and much excellent work is being done, but there is still much to be done. Why not be a committee of one to start a cleaning up agitation? It is very catching; all it wants is a leader to set the ball rolling, and you will be surprised to find how many are willing to help you. Start at your own back door and without saying a word to anybody; in a short time your next door neighbor will see you and follow suit. Thus the good work will go on, and ere long every home in our state will be a model of what a home should be as far as sanitary conditions are concerned.

THE HOUSE FLY.

The approach of fly time and the knowledge that the common house fly plays no obscure part in the spread of infectious diseases, such as typhoid fever and tuberculosis, arouses our interest in him, as to where he comes from and what he does.

Dr. L. D. Howard, of the United States Department of Agriculture, who has devoted much time to the study of the subject, states that their favorite breeding places is horse manure, and that ninety-five per cent comes from that source; although garbage piles and other filthy accumulations make very good substitutes for the manure pile. The heat generated by decomposition makes a good incubator. The female lays about one hundred and twenty eggs which in eight hours are hatched. In a few days they develop into full fledged adult flies, and leave their filthy origin in search of food. In the choice of material for a meal they are not at all particular,

although, in common with other beings higher in the scale, they like variety and have their preferences.

They seem to enjoy a meal from a dirty spittoon, but will leave that at any time for a dessert from the baby's bottle. They take a lunch in the open closets then dine in our kitchen or pantry. They will fill themselves on matter from infected sores on dogs, horses or other animals and then settle down for a relish on our table dainties. They will take an afternoon meal on some tempting odoriferous carrion and then drop around to investigate and sample our milk supply. They will leave the filth and garbage of the street or alley to take a rest on exposed wares of the grocer, and drop a speck on the greens which we fondly dream are free from fly contamination. And then we wonder how baby got bowel trouble; how Johnnie got typhoid; how Jennie got consumption; how Tommy got blood poison; or how Grandma got dysentery! As carriers of contagion their possibilities are unlimited. We are just beginning to realize their danger as disseminators of disease germs. We will some day sit up and take notice. Many an obscure case of infection might be placed to their credit, and many a break in the family circle might give silent testimony to the part they have played in the drama.

These facts certainly call for better sanitation than exists at the present time. In the last month's bulletin I called attention to the necessity of cleaning up and keeping clean. This is the keynote of the situation. By removing the breeding places, you cut out the source of supply and reduce the product. Manure should be put under cover promptly and kept there until removed for fertilizing, when it should at once be worked into the soil. Garbage or refuse should not be allowed to accumulate. The remedies, however, along these lines can only in the nature of things be partial at best. The first step is to look after Mr. and Mrs. Fly and keep infected material as far as possible out of their reach, for if there is anything of an unsavory nature lying around loose, they will be sure to find it, to see if they can get a chance to deposit it where it can work mischief. The outhouse, if it cannot be abolished, should be constructed with a tight vault kept dark and screened, while the contents should be frequently covered with unslacked lime or loam. Discharges from typhoid case should never be emptied on the surface of the ground. They should first be disinfected and then deposited where it would be impossible for flies to get it. This may be laid down as a general and safe rule for the disposition of discharges of those suffering from any disease. Sputa from patients suffering from tuberculosis calls for special attention and this at once opens up the whole subject of promiscuous spitting, a habit which is as dangerous as it is disgusting. We may have something more to say on this subject later. Houses should be screened to keep out the flies, and a continual war waged for their extermination. Regard every fly you see as a possible infection carrier, and treat him as you would an enemy of the general good.

TYPHOID FEVER.

This being the time of year when typhoid fever is the most prevalent, a few words as to its course, cause and prevention may be in order. It is cosmopolitan in its nature. Wherever man builds a habitation and surrounds himself with his own excrement there you will find it. Its germ is the Eberth's Bacillus which has its natural habitat in the intestinal tract where it multiplies in great numbers. It is secreted mostly in the urine and stools. It is not communicable by the air in the same sense as smallpox, scarlet fever or diphtheria. The germs must get into the alimentary canal before they find a suitable soil for propagation and growth. Therefore it may be set down as essentially, a filth disease; for it is practically acquired in no other way than by the ingestion of some food or drink contaminated by human excrement containing typhoid germs. This is so well established that it may be stated that if every germ from every person affected with typhoid fever was destroyed for a single year the disease would be banished from the earth, for it is believed that this germ does not live more than a year in nature outside of the human body. This certainly would be "a consummation devoutly to be wished." Being a preventable disease with its cause well understood and methods for its control well established, it would seem at first thought that we had it well under control; but, in spite of that, we find that it is one of the most common and most fatal of our general diseases. From an economic standpoint, it is one of our most expensive because its victims are from the middle aged classes, those who are in the earning period of life, the young and the old being in a measure exempt. That it can be prevented is amply demonstrated by the medical history of the Japan-Russian war. Its prevalence in armies in the field has heretofore been a greater menace to their fighting efficiency than the bullets of the enemy. The Japs escaped with scarcely a case and the Russians were nearly as fortunate. If these results are obtainable under such adverse conditions, why so great a death roll in civil life? "Some one has blundered." Ignorance and lack of application of plain sanitary principles are responsible for the results. In the United States we have an annual death rate of thirty-four to every one hundred thousand of the population due to typhoid fever. In North Dakota we are a little more fortunate, but at its present rate of increase it will not be long before we have reached the general average. As the population increases in density, the water supply becomes more contaminated, and typhoid increases in frequency. This is the common experience with all new countries. It may be nearly impossible to prevent sporadic cases imported and transported through agencies of infection, but the continued presence of typhoid fever in any locality is evidence of ignorance or negligence on the part of those whose duties are to look after the matter. In plain terms, filth is at the root of the evil, and clean up and keep clean, the remedy. Practically

all sanitariums are agreed that the water supply is the chief source of danger. Its pollution by sewers, drains, seepage from privy vaults and surface washings by rains, floods, etc., are matters of common occurrence and observation. Milk is very easily infected. It is not only a good culture medium, but germs that develop in it seem to increase in virulence; for epidemics from this source are usually severe.

Washing the utensils and diluting the milk with polluted water or uncleanly methods of those handling it may be responsible for an outbreak of the disease. Dust from dried excreta deposited on the surface of the ground may carry the germs and infect anything touched. Vegetables grown on infected soil or washed with infected water may act as carriers. The common house fly, to whom we paid our respects to a short time ago in a special bulletin, is a very potent factor as a disseminator of the disease. These are some of the ordinary sources from which the disease is perpetuated and spread.

For its prevention the following from a recent bulletin by the Montana State Board of Health is right to the point.

See that every particle of excreta from any person sick with typhoid is disinfected.

See that every person under your control, yourself included, deposits his excreta only in the place provided.

See that your own privy is so located that neither the seepage nor the surface drainage therefrom can possibly enter any well or other water supply.

See that your milk comes from a dairy that is conducted in a sanitary manner.

See that your barnyard is clean, so that flies may be reduced in numbers.

See that your yard is clean. Let the sun shine into every corner of the yard, barnyard, chicken coop, barn and house. Sunshine is the best disinfectant.

Clean up your yard and let the sun shine in and quit being dirty.

The time to prevent typhoid fever is all the time. Germs planted on your place this year will probably live until next year. You, or any other member of your family may furnish the ground for them to get a fresh start next year. Therefore see that your place is not infected, by going back to first principles and seeing that all human excreta is deposited in the place provided for it only and that place in a proper locality.

SPITTING.

Bacteriology is the guardian, if not the parent, of preventive medicine. It may be laid down as a general proposition that all infectious diseases are microbic in origin. We know something of their life history, their manner of growth and development, their

natural habitat, their mode of ingress into the body, and their appearance under the microscope. We are getting acquainted with the lesions that they produce and know something about their behavior, inside and outside of their host. Bacteriology therefore, forms a basis on which to rear a structure of rational preventive medicine. Without it we are like a ship without a helm, compass or chart; with it we may weather the waves and guide our bark into a haven of safety. A striking illustration of this is furnished in the results obtained by the Yellow Fever Commission that was sent in 1899 to Havana, where the disease has been rampant for ages. In 1900, notwithstanding the fact that although the most rigid general sanitary methods were adopted, there developed 1,244 cases of the disease, with 310 deaths. After demonstrating that the mosquito was responsible for its spread, and methods in conformity with this fact adopted, in the beginning of the year 1902 Gen. Woods reported only "five deaths in the past nine months." The government public health report, dated Nov. 1st, 1907, gives for the current year five cases and one death.

A great scourge of the human race is tuberculosis, and sanitarians all over the world are studying the best methods of preventing its spread. It has been demonstrated that the germs may gain entrance through inhalation, indigestion or inoculation. The commonest way being through inhalation. Eating tubercular meat or drinking the milk of a tubercular cow may afford an avenue of infection, but by far the greatest source of danger is not from the dumb animals, but in man himself. The emanations from the lungs and throats of the consumptive teeming millions of disease germs are expectorated promiscuously in private homes, in churches, in school rooms, in shops and factories, on sidewalks, etc. They become dry, are ground to dust, are taken into the air, inhaled by everybody, and find a suitable soil in many. There is a state law which prevents the putting out of poison for fear our dogs or cats may happen to get a dose, but we allow expectorating on the public thoroughfares, exposing the lives of our little ones, our sons, our daughters and the general public to a virus more potent than strychnine. The sooner we wake up to the fact that human beings are of more importance and value than dumb animals the better it will be for our sanitary conditions.

A greater advance will be made when everyone can be educated and made to feel that in spitting there is danger and that with some care and effort it is within their power to protect their friends, relatives and strangers from the disease that claims as its own upwards of one hundred and sixty thousand victims every year in the United States. Cornet confined eight guinea pigs in a room at various heights above the floor. The carpet was impregnated with tubercular sputum and frequently swept so that considerable dust was raised. Out of the forty-eight animals exposed forty-six developed tuber-

culosis. In the light of this experiment, and others of like import, can we wonder that the disease is so prevalent? With so many walking cases, and all are practically of this class before the last stage is reached, exercising very little care, if any, in the disposal of their sputum, the germs are sown broadcast and the dust-laden atmosphere teeming with bacteria is inhaled by everybody. If our physiological resistance is below par we fall a prey to the disease, and the hacking cough and hectic cheek tell us that "someone has blundered."

What is the remedy? Stop spitting. This seems simple, yet it is one of the problems with which sanitarians are wrestling. The habit is so universal and ignorance of its significance so appalling, that it will require a long educational campaign before the public are made to realize what it means.

Much has already been done, but still more is left to do. We must remember that it was only twenty-five years ago that Koch gave to the world the discovery of the tubercle bacillus. It took some time for the medical profession to appreciate its import and the laity are still learning their lesson. The United States Census reports for 1890 give an annual death rate from tuberculosis of 245.5 per 100,000 population, for 1900 of 190.5 and for 1905 of 172, a decrease of 25 per cent in fifteen years. In European countries, where the war against it has been more systematically waged than with us, reports are more favorable. This is encouraging and an indication of what may be done by united scientific action. The fact that spitting endangers the health if not the life of every member of the community should be engraven on every lintel and door post that "he who runneth might read." It should be hung as a motto in every school and become a household word in every home. It should form an article in the civic creed of every municipality. It should be preached from every pulpit, published in every journal, proclaimed from every platform and taught in every educational institution until the public conscience was aroused to a conception of its enormity. This is not a work for any one individual; it is for every inhabitant of our commonwealth, and that includes you. Stop spitting and be a factor in removing this "white man's burden" from the shoulders of the race.

THE PROBLEM OF PURE ICE.

This is the season of the year when the ice harvest is gathered in. To those who wish to know some of the dangers to their health that lurk in the crystal lumps that look so pure and so inviting, a perusal of the following may be of interest. We are an ice using nation and each succeeding year finds us using more ice than in the preceeding one. Every crossroads hamlet has its own ice house and in addition many of our rural homes as well. It is now looked upon as one of the necessities of life. "A cup of cold water" meets a human crav-

ing and fills the bill as nothing else can or will. The problem of pure ice therefore is intimately connected with an becomes almost as important as that of pure water. With our increasing population the natural water courses and reservoirs are becoming more and more contaminated by sewage and other sources of filth. It is becoming a problem of the first importance therefore to see that we are supplied with an article that is free from dirt and from disease-producing germs. The public have learned to look upon all germs as messengers of disease and death. This is far from the truth. The great majority of them are messengers of health and life. A recent writer has said "We can die without the aid of bacteria but we cannot live without their help." They may, for our purpose, be divided into three classes. 1st. The perfectly harmless ones, and these are greatly in the majority. 2nd. Those that are themselves harmless, but, by their action on food stuff, producing products of fermentation which may prove harmful. 3rd. The pathogenic or disease producing germs. It is with this latter class we have most to do. They are the uninvited guests that heap "injury upon insult" by damaging or destroying their host that afforded them shelter and sustenance. Of this class the typhoid bacillus is the most to be dreaded in our ice, because it is in all sewage and liable to exist in any cesspool, stream, pond or lake. Of all bacteria it is the one that can multiply with the greatest rapidity and from the standpoint of health or economics, one of the most serious enemies to man. It was formerly thought that freezing killed the germ and purified the water. This statement, although it contains a grain of truth, is very far from being the whole truth. Under certain favorable conditions freezing is one of Nature's purification processes, but these ideal conditions very rarely exist and the fact remains that under ordinary conditions impure and contaminated water will produce impure and unsafe ice. The germs contained in the water will simply be placed in cold storage and kept in good condition to do active work when liberated by the summer's heat and placed in a suitable culture medium. A great many outbreaks of typhoid fever have been traced to the ice source and demonstrate the fact that although freezing may kill some of the weaklings, that enough are left to be a serious menace to the health of the public. Freezing is a mechanical purifier. This may be easily demonstrated by making a wine-colored solution of water and permanganate of potash or other coloring matter and watch it freeze. The top will be quite clear, the center less so and the bottom quite dark. Had the vessel been deep enough the whole layer of ice might have been quite clear. In shallow rivers, ponds, or lakes a similar process takes place; the top ice will be the purest and the bottom the foulest. A coating of snow carries with it the impurities of the atmosphere, or flooding of the surface with impure water may make the upper layers the most impure. Flooding ice is the most dangerous of all as nature has no means of even

attempting purification; such ice contains the germs, nitrites, nitrates, and all sewage rottenness that is contained in the original water. Very tempting material this to be put in your "lemonade," yet this is the article that we run the chance of getting and which we accept, ignorant of the source of its production. If there is anything suspicious of contamination in the ice it should be used for cooling purposes only, and kept from contact with any food stuffs. Bodies of water, such as our fresh water lakes that are comparatively free from contamination give us better chances of procuring pure ice than any other source at our disposal. Their large volume of water gives an opportunity for dispersion, while their depth gives a chance for sedimentation to take place. These are two of nature's chief purifiers and if it is given a fair field will do much to produce a pure product. On the other hand, however, in shallow streams or ponds conditions are different. Here nature is handicapped in her purifying work. There is neither the great mass of water to give dispersion nor the depth to allow for sedimentation and our ice product nearly as impure as the original water is the inevitable result.

THE PUBLIC SLAUGHTER HOUSE.

The ordinary slaughter house as it is commonly conducted, offers, as a menace to health, a subject for consideration. Our National Government, a short time ago, made some of the big packing houses "pass under the rod" for which chastisement the public has reaped the benefit in cleaner and better meat products. But this did not reach the small concerns where abuses far more glaring than those that came to light through the national inspection, exist and flourish right around us, with the masses of people in general, unaware of their existence. A "Social Policy" must not only begin with the protection of the people against accident, and temptation to immorality, but it must look after their physical health as well. It must not be content with removing only the direct and immediate sources of injury or disease, but it must warn them of approaching danger from causes that are more remote and are more likely to be overlooked, but none the less real.

The voice of experience in all lands teaches the same common lesson. When the world was young tools were simple and employer and hired man worked as companions side by side; accidents were rare and few cases of disease arose from the nature of their occupations. All this has changed with the march of progress and invention. The introduction and rapid increase of dangerous and complicated machinery has so increased the hazard of the common laborer that more safeguards are thrown around him than every before. It was interesting to note that these were not granted until the demand was backed up by strong public sentiment. So it is with health problems. The departure from the simple life of our forefathers has so complicated our sanitary condi-

tions that new problems are coming to the front every day. When each family killed its own meat supply it was comparatively an easy task to so conduct the killing that everything of an unsanitary nature was eliminated from the process. But in our social evolution things have changed, a new sanitary problem, the modern slaughter house has come into existence and the people have not yet been educated up to the plane where its dangers have been fully appreciated, and where regulations for its management and control have been systematically instituted. We have had occasion in our official capacity and otherwise to visit and inspect a number of such places and from information gleaned from other sources we believe those visited are fair samples. Some are kept in excellent condition, as clean and sanitary as those places can well be. Of these we have nothing to say; they are above reproach, and fortunate are the communities that have them. But from this as a standard we find all gradations down to the most filthy conditions imaginable. Here is a common type; the killing house is a small wooden structure on the side of a hill, if there be one in the neighborhood, or on the banks of a coulee or stream. They are usually unsupplied with water to flush the premises or wash the persons of the workmen who are dressing the meat. The blood is allowed to run through the cracks of the floor or is conveyed to the outside where it is allowed to soak into the ground or add its bulk to the pestiferous mass of entrails, heads, legs, and offal which are thrown out into that which is termed a yard. This makes an excellent breeding place for insects, rats and other vermin, who soon become potent infection and disease carriers. In this yard is kept a number of hogs "for revenue only." They devour that which is edible and wallow in the rest. In due course of time they grace the block in the meat market and finally find a place on our dinner table as choice roasts. Animals slaughtered in the evening are usually kept hanging in the atmosphere of stench and corruption till morning. This, it must be admitted, is neither a pretty or tempting picture, yet one that is too common and justice and public safety demand its presentation. Several communities and municipalities throughout the state are awakening to the conditions and insisting on purification and reform; and it is interesting to note that they are getting them when the demand is properly presented. Others are beginning to take notice and ere long we expect to see a grand cleaning up crusade against the slaughter houses of the class described. Let clean, pure, healthy, public sentiment be fostered and maintained, and these evils will vanish like mist before the rising sun.

BULLETIN ON VITAL STATISTIC LAW.

The last legislature passed Senate Bill No. 222, creating a Bureau of Vital Statistics. This made an entire revolution in the manner of collecting and reporting births and deaths. The neces-

sary blanks for putting the new law into effect are under preparation and will be placed in the hands of the county auditors for distribution to the local registrars early in January.

The system heretofore in force in which all reports were supposed to be reported to the County Board of Health and by the county health officer to the state health officer was found, wherever it was tried, to be a failure. The Bureau of Census, Washington, D. C., after careful consideration prepared a standard form which has been adopted by many of the states. Our North Dakota law is framed after this model. The importance of complete, accurate, and uniform records of births and deaths have long been recognized by statisticians and students of sociological problems as well as by those directly interested in the cause, classification and cure of disease. That people do not generally so fully appreciate the value of such records is amply demonstrated by reference to past returns. The registration of its birth is a valuable inheritance to which every child is entitled and some of its most valuable rights and privileges may be placed in jeopardy or entirely lost if this is neglected. Upon a death record may hang very weighty problems of inheritance and litigation. As our country grows older these will increase in importance. It devolves upon the state, therefore, to devise some method by which the interests of its dependents may be protected. That the public may know the principal provisions of the Act and have a proper conception of what is required of them, the following may be of interest and value.

Each incorporated village, city or township constitutes a primary registration district and the clerk of each shall be local registrar, with authority to appoint a deputy who will take charge of his registration duties during his absence, illness or disability. He is also authorized to appoint suitable persons to act as sub-registrars, who are subject to the supervision and control of the State Registrar. In an unorganized township the State Registrar has authority to appoint some one suitable to act as local registrar. The duties of the local registrar are as follows: He must carefully examine each certificate of birth and death when they come back and see that they are made out in accordance with the provisions of the act and the instructions of the State Registrar. If any certificate of death is incomplete or unsatisfactory in any way it shall be his duty to call attention to the defects in the return and he shall withhold issuing a burial permit or removal permit until the errors are corrected. If the certificate is properly filled out he will then issue a burial or removal certificate. Provided that when the death occurred from some disease that is held to be dangerous to the public health no permit for the disposition of the body shall be granted except under such conditions as may be prescribed by the State and Local Boards of Health. If the certificate of birth is incomplete or unsatisfactory he shall immediately notify the informant and re-

quire of him the missing information if it can be obtained. He is required to number the certificates of births and deaths consecutively, beginning with number one (1) for the first birth and the first death in each calendar year and sign his name as registrar. On the 5th day of each month he shall send to the State Registrar all the original certificates registered by him during the preceding month. If no births or deaths have occurred during the month it will be his duty to report the fact to the State Registrar on the cards provided for that purpose. When a child is born it shall be the duty of the attending physician or midwife to file the certificate of birth properly and completely filled out giving all particulars as per blank, with the local registrar in their respective district within three days after date of birth. If there is no physician in attendance, then it will be the duty of the father, house-holder, owner of the premises, manager or superintendent of the public or private institution in which the birth occurred, to file the certificate.

The local registrar is entitled to 25 cents to be paid by the county for each birth and each death certificate properly and completely filled out or each certificate stating that no birth or death has occurred, when they have been returned by him to the State Registrar and duly certified by that officer.

The certificate of birth and death shall be on the standard forms recommended by the Bureau of the Census of the American Public Health Association and supplied by the State Registrar.

The undertaker or person acting as undertaker shall be responsible for the obtaining and filing of the death certificates with the registrar and securing a burial or removal permit prior to any disposition of the body. No sexton or person in charge of any premises in which interments are made, shall bury or permit to be buried a body unless it is accompanied by a burial, removal or transit permit.

When a sexton or person in charge of any burial ground accepts a body for burial he must place upon the permit the date of interment over his signature and he shall send all permits to the local registrar of his district within ten days of the date or within the time limited by the local board of health. He shall also keep a record of all interments made in the premises under his charge, stating the name of the deceased person, place of death, date of burial, and name and address of the undertaker, which record shall at all times be open for public inspection.

All superintendents or managers or other persons in charge of hospitals or other institutions, public or private, to which persons resort for treatment of disease, confinement, or are committed by the process of the law, are required to make a record of all the personal and statistical particulars relative to the inmates of their institution as directed by the State Registrar.

If any physician, who is in medical attendance upon any deceased person at the time of death, neglects or refuses to make the required certificate of death, or shall knowingly make a false certification of the cause of death in any case, or if any physician or midwife in attendance upon a case of confinement or any other person charged with the responsibility of reporting births shall neglect or refuse to file the required report of such birth, or if any person acting as undertaker shall remove, inter or otherwise dispose of a body of any deceased person without having first obtained the required burial or removal permit or if any person or persons violate any of the provisions of this act, they shall each and severally be deemed guilty of a misdemeanor and upon conviction thereof shall be liable to severe punishment.

REPORTS FROM COUNTY AND CITY HEALTH OFFICERS.

The following circular letters were sent to each county and city health officer with the object of securing not merely answers to the specific questions but a comprehensive summary of the sanitary conditions that exist in different parts of the state. The replies that are here appended may be regarded as expressing in a general way quite clearly and fairly, I think, the actual state of affairs as well as reflecting the most advanced ideas of our health officers in reference to matters of public sanitation.

Grand Forks, N. D., July 20, 1908.

County Health Officer:

DEAR SIR: My report to the governor of our state for the biennial period ending June 30, 1908, is now in course of preparation. That your county may be properly represented I would respectfully ask you to answer the following questions and send them to this office by August 1, 1908. Your report to be for the two years ending June 30, 1908, or for as much of that time as your records may show.

First. What conditions detrimental to public health exist in your county? What remedies would you suggest?

Second. What complaints have been lodged with you in reference to unsanitary conditions. How have they been disposed of?

Third. Have there been any outbreaks of infectious or contagious diseases? What methods have been adopted to prevent their recurrence or spread?

Fourth. Have you noted an increase or decrease in the prevalence of any disease. How about smallpox, typhoid fever, or consumption? Give your conclusions.

Fifth. Give a report of the following diseases:

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria
Smallpox
Scarlet fever
Measles
Typhoid fever
Tuberculosis
Pneumonia
Whooping cough

Sixth. Give the annual expenditure of your board.

Trusting to be favored with a prompt reply and with any suggestions that may occur to you, I am,

Yours very truly,
(Signed) J. GRASSICK, M. D.,
Secretary State Board Health.

Grand Forks, N. D., July 20, 1908.

County Health Officer:

DEAR SIR: That a resume of the sanitary conditions of your city may appear in our biennial report to the governor of our state, I would ask you to answer the following questions and send them to me by August 1, 1908. Your report to cover the two years ending June 30, 1908, or for such part of that time as your records may show.

First. What is the source of your city's water supply—surface wells, deep wells, running streams or lakes? Is the water examined at regular intervals? What are its general characteristics as shown by analyses? Has it been suspected as being responsible for any cases of disease? What methods are employed for its purification?

Second. What methods are employed for the disposal of sewage? What objections? Have you any suggestions to make?

Third. How is the city garbage disposed of? Is the plan satisfactory? Could you suggest a better one?

Fourth. Have you meat or milk inspection? Give results. Please send a copy of your ordinance.

Fifth. Have you a detention hospital for contagious or infectious diseases? How many cases have been treated therein for the following diseases?

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria
Smallpox
Scarlet fever

Sixth. How many cases have been quarantined in private families?

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria
Smallpox
Scarlet fever

Trusting to hear from you promptly and to receive any further recommendations that you may feel disposed to make, I am,

Yours very truly,
(Signed) J. GRASSICK, M. D.,
Secretary State Board Health.

LIST OF COUNTY HEALTH OFFICERS IN NORTH DAKOTA.

Counties	Names and Addresses
Barnes	Arthur Peake, M. D., Valley City, N. D.
Benson	John Crawford, M. D., Esmond, N. D.
Billings	Stephen Fisher, M. D., Dickinson, N. D.
Bottineau	M. B. Haldorson, M. D., Souris, N. D.
Burleigh	F. R. Smyth, M. D., Bismarck, N. D.
Cass	G. A. Carpenter, M. D., Fargo, N. D.
Cavalier	Jas. Semple, M. D., Langdon, N. D.
Dickey	H. P. Boardman, M. D., Oakes, N. D.
Eddy	Charles MacLachlan, M. D., New Rockford.
Emmons	W. C. Wolverton, M. D., Linton, N. D.
Foster	J. R. MacKenzie, M. D., Carrington, N. D.
Grand Forks	H. H. Healy, M. D., Grand Forks, N. D.
Griggs	C. L. Birmi, M. D., Cooperstown, N. D.
Hettinger	F. T. Rucker, M. D., Mott, N. D.
Kidder	T. S. Pryse, M. D., Dawson, N. D.
LaMoure	W. F. Hobert, M. D., Dickey, N. D.
Logan	A. A. Mathews, M. D., Napoleon, N. D.
McHenry	O. W. Rowe, M. D., Towner, N. D.
McIntosh	E. E. Mearcklein, M. D., Ashley, N. D.
McKenzie	V. G. Morris, M. D., Schafer, N. D.
McLean	C. G. Forbes, M. D., Washburn, N. D.
Mercer	L. G. Smith, M. D., Mannhaven, N. D.
Morton	Geo. A. Stark, M. D., Mandan, N. D.
Nelson	R. Meidell, M. D., Aneta, N. D.
Oliver	Chas. W. Smith, Comm'r., Sanger, N. D.
Pembina	C. B. Harris, M. D., Pembina, N. D.
Pierce	A. M. Call, M. D., Rugby, N. D.
Ramsey	W. F. Sihler, M. D., Devils Lake, N. D.
Ransom	A. A. Patterson, M. D., Lisbon, N. D.
Richland	T. O'Brien, M. D., Wahpeton, N. D.
Rolette	B. D. Vorrett, M. D., Rolla, N. D.
Sargent	W. H. Emanuel, M. D., Milnor, N. D.
Stark	H. A. Davis, M. D., Dickinson, N. D.
Steele	H. Bacharach, M. D., Finley, N. D.
Stutsman	John Sifton, M. D., Jamestown, N. D.
Towner	F. C. Harris, M. D., Cando, N. D.
Traill	C. E. Haagenon, M. D., Hillsboro, N. D.
Walsh	M. Halldorsson, M. D., Park River, N. D.
Ward	J. T. Newlove, M. D., Minot, N. D.
Wells	Per Oyen, M. D., Fessenden, N. D.
Williams	E. J. Hagen, M. D., Williston, N. D.

CITY HEALTH OFFICERS FOR NORTH DAKOTA.

Cities	Name of Officers
Grand Forks	H. H. Healy, M. D.
Fargo	Paul Sorkness, M. D.
Valley City	L. S. Platou, M. D.
Jamestown	James Sifton, M. D.
Minot	A. J. McCannel, M. D.
Bismarck	N. O. Ramstad, M. D.
Devils Lake	A. T. Horseman, M. D.
Grafton	G. W. Glaspel, M. D.
Williston	L. B. Dochterman, M. D.
Dickinson	Geo. A. Perkins, M. D.
Mandan	G. B. Furness, M. D.
Hillsboro	A. G. Anderson, M. D.
Lisbon	A. A. Patterson, M. D.
Rugby	Benj. Frankson, M. D.
Esmond	John Crawford, M. D.
Larimore	W. H. Welsh, M. D.
St. Thomas	W. M. Brown, M. D.
Neché	P. C. Donovan, M. D.
Langdon	Jas. Semple, M. D.
Park River	Thos. Waugh, M. D.
Fessenden	Per Oyen, M. D.
Lidgerwood	Walter Christensen, M. D.
Mayville	George McIntyre, M. D.
Bottineau	A. R. McKay, M. D.
Aneta	R. Meidell, M. D.
West Hope	Chas. Durnin, M. D.
Ellendale	M. F. Merchant, M. D.
Carrington	J. R. McKenzie, M. D.
Hatton	O. M. Seehus, M. D.
Enderlin	W. G. Gerrish, M. D.
Oakes	F. W. Mearcklein, M. D.

CAVALIER COUNTY REPORT.

First. I know of no conditions especially detrimental to public health in Cavalier county.

Second. Complaints have been made against the unsanitary conditions of back yards and closets. These were cleaned up by the owners or occupants.

Third. Diphtheria was unusually prevalent during the last two years. Cases were quarantined and houses were disinfected wherever the disease was known to exist.

Fourth. There was an increase in the number of smallpox cases during the last year but the disease has now disappeared owing to immunity through vaccination or having had the disease and also to the usual quarantine regulations. Typhoid fever is steadily decreasing. Consumption remains about the same.

FIFTH.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	150	6	24	1
Smallpox	65	0	20	0
Scarlet fever	20	0	0	0
Measles	0	0	0	0
Typhoid fever	0	0	0	0
Tuberculosis	0	0	0	0
Pneumonia	0	0	0	0
Whooping cough	0	0	0	0

Sixth. The annual expenditure of our board is about \$1,000.

JAS. SEMPLE, M., D.

Supt. County Board of Health.

McKENZIE COUNTY REPORT.

This is a very healthful county so far, as the houses are all new and people coming and going so much that we are free from disease. There have been no out-breaks of contagious disease in this county.

The cases of smallpox were developed in other parts; also the consumption cases.

	Cases	Deaths
Diphtheria	3	1
Smallpox	3	0
Measles	1	0
Typhoid fever	0	0
Whooping cough	2	0

The annual expenditure of our board is about \$150.

U. G. MORRIS, M. D.

Supt. County Board of Health.

- RANSOM COUNTY REPORT.

Outside of the cities and towns of the county, no complaints have been lodged regarding unsanitary conditions with the exception of the disposal of dead animals. Upon receiving notice from the health officer these matters have been attended to without further trouble.

We have had quite a few cases of smallpox in the country districts but in most cases it has been traced to outbreaks in the cities of Lisbon and Enderlin. The county has furnished a detention hospital just outside the limits of the city of Lisbon and most of the cases have been cared for there. In all we have probably had 100 cases of smallpox in the county within the biennial period. In the last year no attention has been paid to the reporting of the infectious and contagious diseases, probably due to the change in the vital statistic law. Some vaccination has been done but there is so much opposition to it that people are allowed to do as they please about it. I am strongly in favor of the Minnesota regulation regarding smallpox. There have been very few cases of typhoid fever or tuberculosis through the country, being confined principally to the cities of Lisbon and Enderlin. There have been six cases of diphtheria with one death reported, and only one case of scarlet fever. No attention has been paid to the reporting of pneumonia, measles, or whooping cough during the period. To January 1st, 1908, the expenditure of our board has been \$278.40, but since that time it has been much more owing to the smallpox epidemic. I am not sure of the amount as the auditor has not figured it out yet, but is working on it at the present time.

A. G. PATTERSON, M. D.
Supt. County Board of Health.

EDDY COUNTY REPORT.

As to the conditions in existence detrimental to public health, there are none with the exception of two slaughter houses in the suburbs of the town of New Rockford that have been in an unsanitary condition. The local board of health has ordered them removed and a thorough renovation of their sites.

Most complaints, and these are few, are with reference to the carcasses of dead animals dying in winter, and left on the prairie exposed. Where the owners can be determined they are compelled to properly dispose of such; where this cannot be done the expense is borne by the county.

Of contagious and infectious diseases we have had few. Smallpox, two cases; scarlet fever, five cases, and diphtheria ten cases. They isolate, quarantine and then thoroughly fumigate the premises with formalin when the case is cleared up.

No increase is prevalent of any disease except tuberculosis. There has been a steady increase in the number of person afflicted with this disease and there has been four deaths from it in the past two years.

Expenditure of board from June 30, 1906 to June 30, 1907.....	\$ 63.50
Expenditure of board from June 30, 1907 to June 30, 1908.....	222.00

Total expenditure for biennial period	\$ 285.50
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CHAS. MACLACHLAN, M. D.
Supt. County Board of Health.

REPORT FOR WASHBURN CITY.

First. The source of water supply is the Missouri river. Not examined at regular intervals. Not been suspected as being responsible for any cases of disease.

Second. No sewage system.

Third. City garbage is dumped about half a mile from city.

Fourth. No meat or milk inspection.

Fifth. No detention hospital.

	Since Jan. 1, 1908	
	Cases	Deaths
Diphtheria	7	0
Smallpox	1	0
Scarlet fever	1	0

All quarantined.

F. A. DOUGLASS, M. D.

BARNES COUNTY REPORT.

First. The general conditions are conducive to public health.

Second. Very few complaints.

Third. There have been a few outbreaks of contagious and infectious diseases, checked by prompt quarantine and fumigation.

Fourth. The prevalence of disease has been about as usual.

FIFTH.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	50	4	12	0
Smallpox	126	0	17	0
Scarlet fever	29	2	7	0
Measles	17	0	3	0
Typhoid fever	133	10	32	0
Tuberculosis	23	10	5	1
Pneumonia	85	17	26	5
Whooping cough	2	2	0	0

Sixth. About \$300.

A. PEAKE, M. D.
Secretary County Board of Health.

OLIVER COUNTY REPORT.

First. No conditions detrimental to public health exist to my knowledge.

Second. There have been no complaints made.

Third. There have been no outbreaks of contagious diseases.

Fourth. The county is thinly populated and very little sickness.

FIFTH.

	For Biennial Period	
	Cases	Deaths
Diphtheria	2	2
Measles	6	0
Pneumonia	1	0

The above report is for the Second Commissioner's district.

CHAS. W. SMITH,

County Commissioner, Second District.

RAMSEY COUNTY REPORT.

First. The general conditions throughout the county are conducive to good health.

Second. Complaint was made of the unsanitary condition of the public school closets at Webster. They were remedied by the officials when their attention was called to the matter.

Third. There was an outbreak of scarlet fever at Edmore. By closing schools and other public buildings and enforcing quarantine the epidemic was stopped.

Fourth. An increase in scarlet fever.

FIFTH.

	Since Jan. 1, 1908	
	Cases	Deaths
Diphtheria	8	1
Smallpox	13	0
Scarlet fever	64	1
Measles	1	0
Tuberculosis	1	1

Sixth. About \$300.

W. F. SIHLER, M. D.,

Supt. County Board of Health.

CASS COUNTY REPORT.

For the years of 1906 and 1907 there have been reported to this office thirty-three cases of diphtheria, with three deaths; 148 cases of smallpox, no deaths; twenty-four cases of scarlet fever, no deaths.

Since January 1st, to June 30, 1908, there have been sixty-one cases of diphtheria with no deaths; 189 cases of smallpox, no deaths; twenty-two cases of scarlet fever, no deaths.

During the year ending June 30, 1908, there has been expended by this board \$410.38. There have been several cases during this period of paupers cared for by the city of Fargo, which have not been settled for by the county as yet. This would make the expenditure greater if this settlement had been made.

Since the change in the health laws the deaths occurring since January 1st, 1908, have not been reported to this office. There is no provision that I can find in our laws making it compulsory to report cases of typhoid, measles, tuberculosis, pneumonia and whooping cough.

I would consider it beneficial to the public health to have some provisions whereby it would be compulsory to report them. But few complaints have been lodged in this office since the change in our laws, giving the full authority to control health matters to the various townships.

There does not seem to be any decrease during the past year in the number of cases of smallpox or consumption, but typhoid has been less prevalent.

I would consider it of vital importance to the public health that measures be taken to prevent the pollution of rivers and that there be a general medical inspection of all public schools.

G. A. CARPENTER, M. D.
Supt. Cass County Board of Health.

GRAND FORKS COUNTY REPORT.

First. There are no conditions detrimental to public health in this county.

Second. There have been no out-breaks of contagious diseases.

Third. Cases of smallpox have been fewer in number. No reports of typhoid fever or consumption.

Fourth. Cases of smallpox have been fewer in number. No reports of typhoid fever or consumption.

Fifth. Cases reported for biennial period are:

	Cases
Diphtheria	22
Smallpox	26
Scarlet fever	5
Measles	8
Typhoid fever	4
Tuberculosis	1
Pneumonia	0
Whooping cough	8

We have practically no record of infectious diseases. The only ones that come under our notice are those we have to report since the new law went into effect.

Sixth. The annual expenditures of the board of health:

From July 1, 1906, to July 1, 1907	\$ 923.75
From July 1, 1907, to July 1, 1908	2,268.31
Total for biennial period	\$ 3,192.05

H. H. HEALY, M. D.
Supt. County Board of Health.

LOGAN COUNTY REPORT.

First. No conditions detrimental to public health.

Second. No complaints have been made about unsanitary conditions.

Third. Outbreaks of contagious diseases controlled by quarantine and thorough disinfection.

Fourth. No smallpox or typhoid fever in county.

FIFTH.

	For Biennial Period	
	Cases	Deaths
Diphtheria	2	1
Smallpox	0	0
Scarlet fever	20	0
Measles	20	0
Typhoid fever	0	0
Tuberculosis	2	1
Pneumonia	0	0
Whooping cough	0	0

Sixth. Annual expenditure \$100.

G. A. MATHEWS, M. D.
Supt. County Board of Health.

BENSON COUNTY REPORT.

First. Sewage system of Leeds defective.

Second. Sewer system of Leeds improper outlet. Recent complaint to be disposed of yet.

Third. There have been some cases of infection controlled by vaccination and quarantine.

Fourth. Increase in smallpox due to mild type and negligence in reporting. Decrease in cases of consumption.

FIFTH.

	Since Jan. 1, 1908	
	Cases	Deaths
Diphtheria	2	0
Smallpox	18	0
Scarlet fever	2	0
Measles	0	0
Tubercular Meningitis	1	1

JOHN CRAWFORD, M. D.
Supt. County Board of Health.

HETTINGER COUNTY REPORT.

First. I know of nothing in the county that I would consider as detrimental to public health.

Second. Two or three complaints of carcasses left too near public highways or running streams. Buried or removed.

Third. More smallpox and diphtheria this year than last. Typhoid fever we have very few cases, due, I believe to the newness of the country. Smallpox and diphtheria cases have been carried in by immigrants and freighters from the Milwaukee south of us. All of the cases have been in a family in the community.

Sixth. Our annual expenditures, \$30.

F. T. RUCKER, M. D.
Secretary County Board of Health.

STARK COUNTY REPORT.

First. None except open privy vaults. Remedy is obvious.

Second. None except exposed bodies of dead animals. Disposed of by burial.

Third. Sporadic cases only. Usual quarantine and disinfection.

Fourth. Ratio of specified diseases in the population about the same as formerly. No smallpox, no typhoid, very little tuberculosis

at present. With reference to typhoid, during the summer and fall of 1907, there was a large number of cases occurring in a sporadic way, scattered through the country between the Northern Pacific and the Milwaukee, south. These cases developed through such large area, and at such distances from each other, seemingly the open privy vaults, the house fly, and food contamination were the only possible source of infection.

FIFTH.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	89	17	11	1
Smallpox	41	0	2	0
Scarlet fever	8	1	0	0
Measles	72	1	0	0
Typhoid fever	87	4	20	0
Tuberculosis	12	10	2	2
Pneumonia	30	20	5	4
Whooping cough	61	5	0	0

The report on cases and deaths since January 1, 1908, is incomplete for the whole county, as on March 1st the new system of reporting went into effect, my report since then has only been for unincorporated parts of the county.

H. A. DAVIS, M. D.

Supt. County Board of Health.

GRIGGS COUNTY REPORT.

In some localities slaughter houses are placed too near cities and villages. Dumping grounds are too near houses and public highways. Dead animals are not burned or buried, instead they are left on the ground, or thrown into rivers or creeks, making them a menace to public health. The remedy is obvious. Slaughter houses should be placed far enough from towns and villages so that no odor can be detected. They should have a general cleaning up once a month or better, after each slaughtering. The complaints received to date are relative to slaughter houses, dairies, dumping grounds and dead animals.

There are a few cases of typhoid fever and diphtheria. The diphtheria cases were quarantined and antitoxine used freely. The stools and urine of typhoid cases are subjected to thorough disinfection by chloride of lime and buried.

There has not been any notable increase in any of the contagious and infectious diseases. There is a decrease of smallpox. Tuber-

culosis seems to be on the increase. There have not been as many reports received at this office as there should be, owing to physicians and midwives and others failing to make reports.

The number of contagious disease reports received at this office from June, 1906, to June 30th, 1908, are as follows:

	Cases	Deaths
Diphtheria	25	3
Smallpox	30	1
Scarlet fever	6	1
Measles	42	0
Typhoid fever	13	3
Tuberculosis	9	8
Pneumonia	1	1

Whooping cough not reported.

The annual expenditure of the Griggs County Board of Health is about \$200.

C. L. BRIMI, M. D.
Supt. County Board of Health.

BOTTINEAU COUNTY REPORT.

Sanitary conditions in this county are, generally speaking, good and very few conditions exist that may become detrimental to public health. Among those I would mention opposition to vaccination. The cry "I would rather have smallpox than be vaccinated" is so prevalent that a vaccinated child is getting to be a rarity, and whole communities are now, and will be more every year, at the mercy of the smallpox germ any time it may blow in. This condition was well illustrated in the eastern part of the county last winter. A young lady had a mild form of smallpox that was not recognized so she was not quarantined, and as soon as she was apparently well, went to dances and other gatherings. The result was over fifty cases of smallpox which cost the county a large sum of money and it would have been the same in any part of the county. As a remedy I would suggest a vaccination law somewhat similar to that of Minnesota.

A greater detriment to public health, however, is the total lack of hospitals or sanatoria for consumptives in the state, which leaves but two courses open for those unfortunates, to make a wearisome and expensive journey to some distant locality, there to die, away from friends and among strangers or to remain at home and become a constant source of danger to all that are dear to them. I have now seen tuberculosis go from one to another until a whole family is infected, and I come to the conclusion that if our state has such

a thing as a "crying need" it is a sanitarium to take care of the consumptives.

Complaints received at this office are most often in regard to sanitary offences of neighbors, leaving dead animals above ground, keeping hogs within town limits, etc., or sending children to school while the family is suffering from any disease that might be infectious. These are generally disposed of by letter unless it is a case of diagnosing a disease when I make a visit to the house complained of.

Smallpox, as was mentioned above, broke out in the eastern part of the county in November, 1907, and was not stamped out until about April, 1908. Diphtheria has twice broken out in the same locality, around Kramer, since the 20th of December last. In all instances the usual methods were adopted to prevent their spread, i. e., quarantining in all cases, and in the case of smallpox, vaccination of all exposed.

I have not noted an increase in any disease these last two years excepting smallpox and that is what can be expected when vaccination is not enforced.

It is not easy to tell about consumption. Those cases are seldom reported until dead, and as they sometimes linger for years it takes a long time to come to any conclusion.

Typhoid is about the same from year to year.

I can only give an estimate of number of cases from each disease as I know that a large number of cases are never reported.

FIFTH.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	28	4	14	2
Smallpox	60	1	24	0
Scarlet fever	18	0	0	0
Measles	46	0	0	0
Typhoid fever	33	4	12	1

Tuberculosis, pneumonia and whooping cough. Cannot even make an estimate.

Board spends about \$1,200 per year.

M. B. HALLDORSON, M. D.
Supt. County Board of Health.

EMMONS COUNTY REPORT.

First. In my opinion the thing most detrimental to public health of this county is in the belief that exists among the Russian-German

population that scarlet fever and diphtheria are not communicable diseases, and their fatalistic idea that if they are predestined to have these diseases it makes no difference whether they enter a quarantined house or not. As a remedy for this condition of affairs I have urged the ministers and priests in German-Russian parishes to tell the people the truth about the communicability of these diseases, from the pulpit; and this they have seemed willing to do. As a further remedy, I would urge every citizen to at once report the existence of any quarantinable case to the board of health, as soon as such case in his neighborhood comes to his notice.

Second. Complaints have been lodged with the board of the existence of unsanitary conditions in and about various hotels and meat markets. In such cases the owner or tenant of such place has been notified of the complaint having been made, and ordered to remove such unsanitary conditions, and instructed as to the proper methods to be employed. Complaints have repeatedly been made concerning carcasses of dead animals lying near highways; the owners of these animals have been ordered to remove, bury, or cremate the carcasses, or the board would have it done at the owner's expense.

Third. There have been several outbreaks of diphtheria and scarlet fever, owing to causes given under No. 1, and in one case to ineffectual efforts of people to "quarantine themselves" without reporting to the board of health. In every case of contagious disease the premises have been promptly quarantined and, at the proper time, thoroughly fumigated and disinfected, and recurrence or spread has not occurred.

Fourth. There has been a marked decrease in the prevalence of diphtheria. As to smallpox, we have had about three cases in the biennial period; it would seem to be almost a thing of the past. To the best of my knowledge and belief, there has not been a case of genuine typhoid fever in Emmons county in the past two years; several cases were called typhoid but these cases were well within a week, so could not have been the real thing. We have no common water supply anywhere in the county, so there is very little chance for a typhoid epidemic. As to tuberculosis, it would be impossible to say whether or not it is increasing; in the past two years I have recorded twenty-five cases of tuberculosis in its various forms, most of these occurring in my own practice. I believe there are a large number of unrecorded cases in this county, but it seems impossible to impress physicians with the importance of reporting them.

FIFTH.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	98	6	37	2
Smallpox	3	0	0	0
Scarlet fever	77	15	39	6
Measles	54	2	0	0
Typhoid fever	3	0	0	0
Tuberculosis	25	8	5	2
Pneumonia	56	16	40	10
Pertussis	84	2	2	0

Sixth. Annual expenditure of board, about \$600.

W. C. WOLVERTON, M. D.
Supt. County Board of Health.

McINTOSH COUNTY REPORT.

First. The lack of knowledge by a certain element of our people in the county in regard to the infectiousness and contagiousness of disease combined with uncleanness and their disregard of health laws; the over crowding and illy ventilated condition of the majority of school houses in country districts, with unsanitary and inefficient heating plants and the close proximity of the public dumping grounds to towns and villages of the county. As to remedial measures I would suggest that the people and their children be taught regarding the above in the schools and by courses of literature by some competent person. Educate the people; that is what we want.

Second. The filth and stench from slaughter houses; the exposed and unburied bodies of dead animals; poor water supply from certain wells; unsanitary conditions of out-houses; above have all been disposed of by: Removal of slaughter houses one mile from any town or village; burial of dead animals four feet under ground; examination of wells, and their closure if found unfit for use or a menace to public health; and the same is done to out-houses.

Third. Yes, strict quarantine has been maintained as soon as notification of the disease reached the board of health or any member thereof. Formaldehyde fumigation has generally been used.

Fourth. Increase in smallpox, measles and whooping cough. Decrease in tuberculosis, as far as I can note, also in diphtheria, scarlet fever, typhoid and chicken pox.

Fifth. The annual expenditure of the board is about \$800.

E. H. MEARCKLEIN, M. D.
Supt. County Board of Health.

McHENRY COUNTY REPORT.

I have had a lot of complaining done in regard to the reporting of births and deaths since the new law went into effect. The new law does not seem to get the results in our county as well as the old law did.

There are no general conditions detrimental to public health in our county. An occasional cesspool or well causes some trouble at times but these are looked after as soon as reported. During the last winter we had several complaints in regard to dead stock which was left unburied. The owners have always attended to this as soon as notified.

Last winter there was quite an epidemic of scarlet fever among the Russian-Germans south of this city. Several children died before a case was reported and a physician called. On being notified of the condition of affairs, I visited the settlement and quarantined a number of families where the disease existed and also disinfected two families where they had had the disease but were recovered. I also closed the school for a time. Although it was hard to make these people regard the quarantine seriously we finally got things cleared up.

I have not noted an increase in any disease to any marked extent. At present we have a little typhoid but not more than usual for this time of year. The cases do not originate from the same source, that much is certain but where it comes from is yet uncertain.

The expenses of the board have not been very large. Most of the contagious cases have been able to pay their own expenses for quarantining and disinfecting. Except for one trip of investigation and incidental expenses there has been no expense.

O. W. ROWE, M. D.,
Supt. Co. Board of Health.

WELLS COUNTY REPORT.

I.

(a) The sanitary conditions in the smaller towns where the local boards of health, being unfamiliar with the work to be done, allow all manner of refuse and decaying matters to accumulate for years, resulting in epidemics of cholera infantum and diarrhoea and other intestinal complaints in grown people—especially in the fall of the year. These things should be looked after by the county or very little will be done. The health officer of the county is apt to pay but little attention to it owing to the fact that he may not feel that he has sufficient backing to go to the necessary expense. If in these things the state took the lead and called for a spring report, covering the whole county, the local officer would have more backing in an effort to do something.

I cleaned up the town of Hurdsville where about ninety loads of material were removed—all at once. But the other towns, I have not looked after them from the feeling that the expense might be considered unjustified.

(b) The poor condition of most of the meat markets and butcher shops in smaller towns—owing to the fact that they are generally in the hands of inexperienced men.

(c) At times the slaughter houses are within a few feet of the residences.

(d) The people refuse to be vaccinated, although with 85 per cent of the population it is more a tardy complying with the law than a straight refusal.

(e) In certain localities—comprising about seven or eight per cent of our territory, it has proved impossible to quarantine. The placing of cards on the doors will be a signal for an immediate gathering of a surprise party to the house. Certain immigrant Russians cannot be persuaded to believe that scarlet fever is contagious even with the facts before them. The rest of the county submits to quarantine with good grace.

All the above things can be remedied by strong hand having behind it both the authority of the state and the moral and financial support of the county commissioners.

II.

The complaint received from our own citizens have been generally in regard to butcher shops, slaughter houses, non-removal of decaying matter and use of improper dumping grounds.

All these have been disposed of as they were brought to my notice, to wit:

1. One slaughter house was removed to a more proper place.
2. One drayman was forbidden to dump refuse near the road.
3. Persons neglecting to clean up have been notified to do so.
4. A butcher running an improper shop with meat not properly kept was made to hire a man and clean up. But the affair has not yet been closed up and is under attention yet.

III.

We have had twenty-two incipient epidemics in the last seven months; but they have been checked in the following way:

1. Houses have been quarantined.
2. One responsible man was allowed to drive to town in case of necessity and call for things needed, without leaving the buggy.
3. In case of boarders we have allowed them to get out and stay.
4. At times, these boarders have been disinfected; hands with bichloride 1:2000. Change of clothing. Occasionally, their clothing was fumigated in a closet, by formaldehyde, together with oxalic acid and permanganate of potash.

5. After a certain length of time the house was fumigated and the people allowed to get out.

6. In the winter we have fumigated all rooms for eight hours the family remaining in the one room. Next day the other room would be fumigated.

7. In certain cases where it proved impossible to fumigate the remaining rooms, we would leave it out, but meanwhile strip it of everything that might carry infection and leave these in the rooms to be fumigated.

The results have been that in these twenty-two incipient epidemics covering 125 cases we have not had one new case spreading from the quarantined cases, and all our first cases were traced to some outside county.

8. We have succeeded in vaccinating 32 1-2 per cent of all children in our schools, as shown by reports from each individual school. A copy of this report, I shall send upon request. It is my opinion that a "campaign" this fall similar to what we had last year we should bring this up to at least 65 per cent.

IV.

Smallpox and scarlet fever seem on the increase all around us, but owing to prompt action on our part it has been unable to increase in our county, except that the number of imported cases is constantly on the increase.

Typhoid fever we hardly ever see. In two years I have had one case and heard of another. Total, two cases.

Consumption is occasionally imported. And one of the things that should be done is to fumigate all houses in this county where phthisics have lived, after removal or death. There are houses to my knowledge here which are infected from tuberculosis and should be fumigated, else they form a focus or starting place for the spread of consumption.

V.

On the diseases mentioned, I can report only from Jan. 1st, 1908, to July.

	Since Jan. 1, 1908	
	Cases	Deaths
Diphtheria	14	0
Scarlet fever	29	1
Smallpox	82	1
Typhoid fever	2	1
Tuberculosis	10	0
Whooping cough	12	0

Per OYEN, M. D.
Supt. Co. Board of Health.

CITY OF FARGO REPORT.

1st. Our water supply for flushing sewers, sprinkling, etc., is from the Red river. The same is not used for drinking purposes. No purification at present. Steps are now being taken for the installation of a filtering plant. Drinking water is distributed among the citizens in tanks from artesian wells and from spring water imported into the city.

2d. Our sewers empty into the Red river.

3d. Our garbage is removed to the city dumping ground where it is burned and some of it is buried. A crematory would be preferable.

4th. We have a milk and meat inspection ordinance which on the whole is quite satisfactory. There were condemned as tubercular 512 cows out of a total of 4,209 tested since the ordinance went into effect.

5th. We have a detention hospital. We have had therein for the biennial period 224 cases of smallpox with no deaths.

6th. We have quarantined in private families the following:

	For Biennial Period	
	Cases	Deaths
Diphtheria	90.	3
Smallpox	87	3
Scarlet fever	28	0

PAUL SORKNESS, M. D.
City Health Officer.

CITY OF GRAND FORKS REPORT.

1st. Our city is supplied completely by tap water, which is taken from the Red Lake river a short distance below its mouth. The water is, however, first filtered through a sand filter, said filter having normal capacity of a million gallons per day. The water is examined bacteriologically by the state bacteriologist, Dr. Ruediger. The filter has continued to give good water ever since it has been established. In not one instance has an analysis showed that the water was contaminated to a dangerous degree. From ten to twenty per cent of the people derive their water from shallow wells.

2d. Sewage for the main part disposed of in the city sewerage which empties into the Red river. There are, however, numerous closets and outhouses of the ordinary type. Even down town in what is known as the fire limit there are dozens of these filthy places.

A movement is being made at the present time to compel property owners to connect with the sewer.

The objection to putting unpurified sewage into the streams is that the stream is often polluted at the points below. It is almost an unbelievable thing that an intelligent human being or group of them would take a drink of water from a stream and then turn around and dispose of their waste for the next man to drink. Sewage should be subjected to some method or process, which would largely purify it before being emptied into any stream or lake.

3d. The city garbage is hauled to the city dump, three miles west of the city. The crematory is of course the better method. This city will in all probability establish one within a year or two.

4th. We have a good milk inspection ordinance and although it has only been in operation a short time it is giving good results and I am sure the results will improve very much in the near future. Our cows are all tested for tuberculosis. The dairies are inspected at irregular intervals and the milk and cream also inspected and tested.

We have no meat inspection.

5th. We have a first class detention hospital built upon the outskirts of the city. It is a brick construction costing about twelve thousand dollars, and is modern in every way except light. We hope to get the electric lights this fall. The building is one story with full basement; basement being occupied by the laundry, disinfecting room and the living rooms of the matron and nurses. The upper floor being occupied entirely by patients. There are three outside entrances. Sorry that I am unable to give the number of cases treated therein during the past two years but the former matron left last spring and carried away with her all the records. I have since communicated with her and have been hoping to get them.

The following is a summary of cases treated therein for the biennial period:

	Cases	Deaths
Smallpox	51	0
Diphtheria	16	2
Scarlet fever	19	1
Measles	7	0

6th. The following cases were discovered within the city limits but where they were actually quarantined, I am unable to state:

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	73	0	17	0
Smallpox	65	0	18	0
Scarlet fever	33	0	23	0

H. H. HEALY, M. D.,
City Health Officer.

WAHPETON CITY REPORT.

1st. Our city is supplied by water from deep wells, distributed in usual way through water mains. Water has been examined at regular intervals and found pure with no evidence of disease producing bacteria.

2d. City of Wahpeton has good sewage system which empties into the Red river.

3d. Garbage is carried to the dumping grounds outside the city limits at regular intervals under the supervision of the city boards of health.

4th. No systematic inspection of milk. No ordinance governing same.

5th. No detention hospital.

6th. We have had ten cases of diphtheria in the past two years, twenty cases of smallpox and six of scarlet fever.

T. O'BRIEN, M. D.,
City Health Officer.

CITY OF BISMARCK REPORT.

Our city water is obtained from the Missouri river. It is pumped into large reservoirs on top of a high hill. The water is pumped into the first reservoir; from this it flows into the second and from this into the third reservoir. In this way the sediment is practically removed. The water then flows into the city mains. It has been repeatedly examined by Federal and state authorities and has been pronounced a very pure water. No cases of typhoid or infection have to my knowledge been traced to the city water.

The sewage is disposed of by means of an underground system running through practically all the streets of the city. The system gives good satisfaction in every way. Unfortunately many are slow in making connection with the city sewer. The surface drainage is disposed of by means of surface ditches at the sides of the streets.

The city garbage is disposed of by being carted to the outskirts of the city and deposited at a public dumping ground where it is burned at intervals. The plan is not satisfactory as the dumping ground is always an unsightly place and it is impossible to prevent dumping outside the prescribed area. In my estimation the only clean and sanitary way of disposing of such is in a plant erected for burning it.

Much good work has been done by the local Civic League in making the city clean and attractive. Through their efforts a system of garbage cans has been placed at convenient points in the city for the reception of waste papers, etc.

A milk inspection ordinance has passed and will go into effect Sept. 1st, 1908. We have no meat inspection ordinance.

The city maintains a detention hospital for contagious diseases. For the two years ending June 30th, 1908, there has been reported from there:

	Cases	Deaths
Diphtheria	3	0
Smallpox	10	0
Scarlet fever	2	0

This hospital has proved itself a very useful institution. Without it, it would almost be impossible to protect the public from exposure to contagious diseases.

For the two years ending June 30, 1908, there has been reported from private families:

	Cases	Deaths
Diphtheria	22	2
Smallpox	18	0
Scarlet fever	20	0

N. O. RAMSTAD, M. D.,
City Health Officer.

CITY OF LARIMORE.

First. The water supply is from surface wells from 18 to 20 feet deep. A number of them are drive wells. The water comes from a bed of gravel and is of excellent quality, analysis shows it to be exceptionally pure.

Second. Cement cesspools and open privy vaults. A sewage system is needed.

Third. Garbage removed by teams. Not satisfactory.

Fourth. No meat or milk inspection ordinance.

Fifth. Yes. No cases in it for two years.

Sixth. During 1908, we had four cases of diphtheria, one death. We have been free from cases of an infectious nature with the exception of the cases of diphtheria which was brought here by a man from Bemidji, Minn.

W. H. WELSH, M. D.,
City Health Officer.

CITY OF LISBON REPORT.

The water supply of Lisbon is furnished by four artesian wells. The water has been examined from time to time and although traces of organic matter have been found it has been attributed to improper flushing of the system. In one part of the city we have had several cases of typhoid and we found that the families afflicted were using the water from the dead end of the system which had never been flushed. This matter was remedied and since then there has been no further trouble.

We have a fine sewer system which empties into the Sheyenne river below the city and is supplied with a number of flushing tanks which keeps the city properly cleaned.

The garbage in many cases is kept in closed cans and carried off when full. The alleys are cleaned of refuse two or three times a year.

We have no meat or milk inspection ordinance.

The city and county have a detention hospital about a mile out of the limits and many cases of smallpox have been treated there in the past two years.

	Cases	Deaths
Diphtheria	6	0
Smallpox	30	0
Scarlet fever	3	0

These cases with the exception of smallpox have been quarantined in their homes.

A. G. PATTERSON, M. D.,
City Health Officer.

CITY OF RUGBY REPORT.

First. The source of Rugby's water supply is deep wells. The water is pumped into large tanks which supplies town through a system of regular water works mains. The water is good and it has never been suspected as being cause of any contagious disease. The well is located a good distance from cesspools and water closets.

Second. Methods mostly employed for the disposal of sewage is cesspools. These have frequently had to be pumped out, and as a whole, the method is very unsatisfactory. The suggestion I would propose, to remedy this evil, is the installation of septic tanks, which seems the only reasonable way sewage can be disposed of in this town, as we have no creek or running water of any kind near, and surface to flat for drainage through ordinary sewer pipes.

Third. Garbage is conveyed to dumping grounds half-mile outside the city limits. This is quite unsatisfactory, as it is too near the town. On warm days the stench is often nauseating in the part of town nearest the grounds. I could suggest no better remedy for this evil, than to make it incumbent on the city authorities, that dumping grounds be placed farther from the city limits.

Fourth. We have no meat or milk inspection ordinance, but we need one very much.

Fifth. We have a fair detention hospital or pest house. Last fall we had four cases quarantined in same for smallpox. Have had none within the city of Rugby this year. Had several cases of smallpox in the country south of town this summer. No deaths have been reported. Had, to my knowledge, eight cases of scarlet fever this summer in the city. No diphtheria. All cases above cited were quarantined in private families, and quarantine regulations carried out very satisfactory.

BENJ. FRANKSON, M. D.,
City Health Officer.

CITY OF ST. THOMAS REPORT.

First. Source of city water—surface wells and cisterns. Not examined at regular intervals, so do not know characteristics. No method of purification. Cannot trace disease to it, but most people use rain water, as the well water is supposed to be "alkali."

Second. Sewage is disposed of in earth closets. Must of necessity, be satisfactory as no other means seems available.

Third. Garbage is hauled to the nuisance ground in the spring and burned. Seems to be satisfactory.

Fourth. No meat or milk inspection.

Fifth. No detention hospital.

Sixth. Quarantined in private families since Jan. 1, 1906:

	Cases	Deaths
Diphtheria	18	1
Smallpox	0	0
Scarlet fever	8	0

This report is up-to-date as there have been no families quarantined for contagious diseases since Jan. 1st, 1908.

The public should be educated by the profession, through the local press in the past achievements and future possibilities of preventive medicine.

The insertion of a plank in the platform of one of the two great political parties, calling for the appointment of a National Secretary of Health, with cabinet position and authority is a move in the right direction.

W. M. BROWN, M. D.,
City Health Officer.

CITY OF JAMESTOWN REPORT.

First. Our city water is from artesian and surface wells. Analyses not at hand but the artesian wells supply water containing considerable inorganic matter. No disease traceable to this source. The city has a septic tank sewer system, which discharges into the James river and is satisfactory as such systems usually are. This system only supplies part of the city, so that vaults and cesspools are much in evidence.

Third. Garbage is hauled to potter's field. Should be cremated.

Fourth. We have no meat or milk inspection.

Fifth. We have a detention hospital in connection with the county and the following number of cases were treated there in the past two years, ending June 30th, 1908:

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Smallpox	14	1	0	0
Diphtheria	3	0	0	0
Scarlet fever	0	0	0	0

Cases quarantined in private families since Jan. 1st, 1908:

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Smallpox	23	0	1	0
Diphtheria	94	1	16	0
Scarlet fever	20	2	4	0

J. A. RANKIN, M. D.,
City Health Officer.

CITY OF DICKINSON REPORT.

First. City water is from wells about eighty feet deep. Water has been examined once in past six months and was pronounced very good. The analysis given being as follows:

Fargo, N. D., April 16, 1908.

Mr. W. L. Richards, .

DEAR SIR: The sample of city water, Lab. No. 550, submitted by you for examination has been analyzed with results as follows:

	Parts per Million
Chlorine	12
Equivalent as sodium chloride (salt)	19
Volatile and organic matter,	40
Mineral solids	310
Total solids	350
Albuminoid ammonia .....	.12
Free ammonia .....	.16
Nitrites	trace
Nitrates .....	.06

This water is an exceptionally good one, and the city of Dickinson, if this is the water supply, is to be congratulated.

The solids are composed of a small amount, 19 parts, of sodium chloride, or common salt, a trace of lime sulphate, a trace of magnesium sulphate, and the bulk of the solids are in the form of alkali, sodium bicarbonate.

Yours very truly,

E. F. LADD.

Second. We have municipal sewage system at present emptying into the Heart river but have septic tanks in course of construction.

Third. Garbage disposed of by being taken one mile from city.

Fourth. No meat or milk inspection. I have advised meat and milk inspection in my reports to the city council in the past.

Fifth. We have a detention hospital. Cases treated therein:

	Cases	Deaths
Diphtheria	3	0
Smallpox	7	0
Scarlet fever	1	0

One case of diphtheria and one of smallpox occurring since January 1, 1908.

Sixth. There have been quarantined in private families in the past two years:

	Cases
Diphtheria	8
Smallpox	15
Scarlet fever	6

Five cases of scarlet fever since January 1, 1908.

GEO. A. PERKINS, M. D.,
City Health Officer.

CITY OF FESSENDEN REPORT.

First. Surface wells. No epidemics have resulted from its use with the exception of diarrhoea by prisoners who were given water that had been kept in a cistern after having been taken from the well. Examination made at the state laboratory showed 1,000 colonies to the cubic centimeter; still it was not condemned, there being no germs of the colon type. There were present numerous saphrophytic germs.

Second. No sewerage system. Garbage taken out from time to time to the dump ground one and one-half mile from the city.

Third. No meat or milk inspection.

Fourth. No permanent detention hospital.

FIFTH.

	Cases	Deaths
Scarlet fever	2	0
Diphtheria	4	0
Smallpox	16	0

95 per cent of the children in the city were vaccinated.

For special information, I would refer you to my report as Supt. of Health for Wells county.

PER OYEN, M. D.,
City Health Officer.

CITY OF MINOT REPORT.

First. The source of drinking water supply comes from surface wells. Not examined at regular intervals.

Second. The city has a good sewer system, emptying below the city into the Mouse river with septic tank near outlet. At present our water supply system is not extensive enough to accomodate the

whole city but plans are under way for a new and complete system of water works to be completed before Oct. 1st, 1909.

Third. City garbage is hauled to city dumping ground about a mile beyond the limits and burned. This is not a satisfactory service.

Fourth. We have no ordinance for milk or meat inspection.

Fifth and sixth. We have a detention hospital for infectious and contagious disease cases. I have no figures for the number of cases of contagion treated prior to August 1st, 1907, when I became city health officer, so I will give you the figures only since Jan. 1st, 1908.

Number in hospital:

	Cases	Deaths
Diphtheria	0	0
Smallpox	24	0
Scarlet fever	3	0

Number in private families:

	Cases	Deaths
Diphtheria	7	2
Smallpox	40	0
Scarlet fever	8	0

Total cases: Diphtheria, 7; smallpox, 64; scarlet fever, 11.

A. J. McCANNEL, M. D.,
City Health Officer.

CITY OF HILLSBORO REPORT.

First. Our city water supply comes from a deep well one mile from town. The water is not examined at regular intervals, as there is no chance for contamination from outside sources. The chemical analysis shows a minimum amount of soluble salts. The hardness is due to the soda sulphate salts. We have the best drinking water in the state which is proved by analysis. There has never been any disease traceable to our water supply.

Second. The sewage is emptied into the river.

Third. The city scavenger comes around every week and removes the garbage to the dump ground where it is burned when dry enough.

Fourth. We have no meat or milk inspection.

Fifth. No detention hospital for contagious diseases here.

Sixth. There has been quarantined in private families the following cases.

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	2	0	1	0
Scarlet fever	2	0	2	0
Smallpox	7	0	7	0

I would strongly recommend meat and milk inspection.

A. G. ANDERSON, M. D.,
City Health Officer.

CITY OF PARK RIVER REPORT.

First. Water supply from one large well fed by springs. Water examined and found to be exceptionally pure. No disease ever traced to it.

Second. Cess pools and septic tanks.

Third. Hauled to dumping ground.

Fourth. No meat or milk inspection.

Fifth. No detention hospital.

Sixth. Cases quarantined in private families:

	Cases	Deaths
Diphtheria	0	0
Smallpox	1	0
Scarlet fever	3	0

THOS. F. WAUGH, M. D.,
City Health Officer.

CITY OF NECHE REPORT.

First. Water supply is partly from the Pembina river and partly from surface wells. Water never examined nor purified. Not suspected as being the source of any trouble.

Second. Garbage generally hauled to dumping grounds and burned. Not feasible to do otherwise here. Cannot suggest a better one although it is extremely wasteful.

Fourth. No meat or milk inspection. This is the worst feature. We have diseased and condemned cattle fall into the hands of local butchers who seem to have no conscience on the subject. A law

is sorely needed for the regulation of rural and village slaughter houses. As a rule they are the most common originators of disease, and meat dressed in many are wholly unfit for food.

Fifth. No detention hospital.

Sixth. About thirty cases of diphtheria with two deaths in private families in the past two years.

P. C. DONOVAN, M. D.,
City Health Officer.

CITY OF MANDAN REPORT.

First. The source of the city's water supply is surface wells. These run from 22 to 40 feet in depth. In certain portions of the city they go as deep as 80 feet. At a depth of about 12 feet on the average the water is found to have too much alkali for use, under this is a strata of clay impervious to water and this stream seems to be that which takes the seepage from the closets and outhouses. This layer has to be penetrated before we find the water we use. No case of typhoid fever or any other disease has been traced to our water supply and to my knowledge there has not been a case of typhoid fever in this city which could not be directly traced to other cities and towns. No case in eleven years originated in Mandan. At present the city commission is extending water mains from those used for fire protection, for household use. The water for this is obtained from the Missouri river. Can give no data as to analysis of the various well waters used. The analysis of the Missouri water, you are familiar with. The water used is not examined at regular intervals, or in fact, ever. Nothing is done to purify the water except a few private filters owned by families.

Second. We have no sewage system whatever. Use ordinary surface closets; have some cess pools and one or two septic tanks. The objections to this system in a town of this size are too obvious to be detailed. The city commission will put in a proper sewer system as soon as the finances of the city warrant same.

Third. We have regularly employed a scavenger who collects all garbage and takes it to the dumping grounds. We have been under the commission system of government a short time and have passed ordinances requiring householders to use garbage cans, regulating the throwing of manure and rubbish in alleys, etc., but we are just getting these matters regulated and have not enforced the ordinances in their entirety as yet. Our system of disposing of garbage is the best means at our disposal just now.

Fourth. We have no meat or milk inspection ordinance.

Fifth. We have no detention hospital for contagious and infectious disease cases but have in the past when necessity called for one. Have had no need of any such institution for years.

SIXTH.

	For Biennial Period	
	Cases	Deaths
Diphtheria	3	1
Smallpox	3	0
Scarlet fever	10	0

Since January 1, 1908: No infectious or contagious diseases in city.

In addition to the above cases of scarlet fever there was one child died of nephritis whose previous history was that of scarlet fever. The child was not very sick at time of eruption and no physician was called.

I will say that the board of city commissioners are making every effort to place the city in a sanitary condition. We have now an excellent set of ordinances covering garbage disposal, disposition of rubbish generally, requiring proper cleaning of closets, etc.

The ordinances so framed that the city health commissioners have power to enforce same and we are getting the city in good shape from a sanitary standpoint as rapidly as possible.

GILBERT B. FURNESS, M. D.,
Comm. Public Health, City of Mandan.

CITY OF LIDGERWOOD REPORT.

First. The source of our city water is from four artesian wells, 690 feet, 637 feet, 630 feet and 596 feet deep, all run directly into our mains. The water has never been thoroughly analyzed. It has never been suspected of being the cause of any disease.

Second. The most common methods of sewage disposal are cess pools and deep vaults.

Third. All garbage is removed to a lot one-half mile out of town.

Fourth. We have no meat or milk inspection ordinance.

Fifth. We have no detention hospital.

Sixth. Quarantined in private families:

	For Biennial Period		Since Jan. 1, 1908	
	Cases	Deaths	Cases	Deaths
Diphtheria	7	0	0	0
Smallpox	8	0	6	0
Scarlet fever	0	0	0	0

W. CHRISTENSEN, M. D.,
City Health Officer.

CITY OF LANGDON REPORT.

First. Our water supply is obtained from surface wells. During the summer months drinking water is largely obtained from ice which has been shipped into the city. Large quantities of distilled water is also used for drinking purposes. The water is seldom analysed or examined. Its general characteristics are its hardness and laxative properties. The methods employed for its purification are filtration and distillation in a few cases. No disease has been traced to the water.

Second. Sewage is disposed of in closets and cess pools which are emptied at intervals and the contents removed to a safe distance.

Third. The city garbage is removed to the dump grounds outside the city limits and burned. The plan is satisfactory.

Fourth. The city has no meat or milk inspection.

Fifth. We have had a detention hospital for smallpox for the past nine months and six cases have been treated therein. We have no detention hospital for diphtheria or scarlet fever.

JAS. SEMPLE, M. D.,
City Health Officer.

LAWS GOVERNING BOARDS OF HEALTH.

STATE, COUNTY, TOWNSHIP AND CITY BOARDS OF HEALTH.

SECTION 252. BOARD, HOW COMPOSED. OFFICERS OF. There is hereby established a state board of health, composed of a president, vice president and superintendent of public health. The attorney general shall be president of such board. The governor shall appoint some suitable person, a resident of the state, vice president, and he shall also appoint by and with the advice of the senate, a superintendent of public health, who shall be learned in medicine, a graduate of some reputable medical college authorized by law to grant diplomas and hold a license to practice medicine and surgery within the state, and be a resident of this state. The several persons thus appointed shall hold their office for two years from the first Tuesday in April succeeding their appointment and until their successors are elected and qualified.

SECTION 253. DUTIES OF OFFICERS. The president of the board shall preside at the meetings thereof, and the vice president shall perform the duties thereof in his absence. The superintendent of public health shall be secretary of said board. He shall keep record of all the proceedings of the state board of health and of his own acts as such superintendent, and he shall perform such other duties as are prescribed by this article or which may be prescribed by the state board of health. The records kept by the superintendent shall be at all times open to the inspection of the public.

SECTION 254. MEETINGS OF THE BOARD. The several persons composing the state board of health shall meet as often as once in every six months at such place in the state as they may appoint.

SECTION 255. POWER AND DUTIES OF THE BOARD. The board shall have power and it shall be its duty:

1. To fix the time and place of the meetings of the board, subject to the provisions of the last section.
2. To make rules and regulations for the government of the board, its officers and its meetings.
3. To make and enforce all needful rules and regulations for the prevention and cure and to prevent the spread of any contagious, infectious or malarial diseases among persons and domestic animals.
4. To establish quarantine and isolate any person affected with contagious or infectious disease.
5. To isolate, kill or remove any animal affected with contagious or infectious disease.
6. To remove or cause to be removed any dead, decaying or

putrid body, or any decayed, putrid or other substance that may endanger the health of persons or domestic animals.

7. To condemn or cause to be destroyed any impure or diseased article of food that may be offered for sale.

8. To superintend the several boards of health of cities, villages and towns, and the county boards of health of the several counties.

9. To empower and direct the superintendent of public health to do or cause to be done any or all of the things mentioned in subdivisions 4, 5, 6, 7 and 8 of this section.

10. To make such rules and regulations as it may deem necessary to govern the preparation of dead bodies for transportation, and to govern what classes of dead bodies may be transported and the manner thereof.

SECTION 256. COMPENSATION OF OFFICERS. The president and the vice president of the board shall receive no compensation, but they shall be paid five cents for every mile actually and necessarily traveled by them in the performance of their official duties, and other necessary expenses incurred by them. The superintendent of public health shall receive an annual salary of twelve hundred dollars in equal installments at the end of every three months. He shall also be paid five cents per mile actually and necessarily traveled in the performance of his official duties, and such other sum or sums as he may necessarily pay or become liable to pay (hotel or other incidental expenses) for the official books, clerk hire, records and papers kept by him, and for the printing of his reports and such circulars and blanks as may be required for the proper conduct of the business of his office, not to exceed in the aggregate the sum of fifteen hundred dollars per annum. The accounts of the superintendent for his mileage and said other expenses of his office shall be audited by said board of health, and the same, together with his salary shall be paid out of the state treasury.

SECTION 257. REPORTS. The superintendent of public health shall on the first day of December of each even numbered year make a full report to the governor, which report shall show all that has been done by the state board of health, and by such superintendent during the two years preceding the making of such report, the number of cases treated by him, and in each county by the county superintendent the character and extent during such time of all contagious and infectious diseases that have been reported to him, all expenditures by the state board, and in each of the organized counties by the county board and such recommendations as he may deem advisable for the better protection of the public health and the prevention and cure of contagious and infectious diseases of persons and of domestic animals.

SECTION 258. VACANCIES. In case a vacancy shall occur in the office of vice president or superintendent, such vacancy shall be

filled by appointment by the governor, and the person so appointed shall hold the office for the unexpired term. In case a vacancy occurs in the office of vice president or superintendent of county boards of health, the president of such county board of health shall appoint some suitable person to fill the vacancy, and the person so appointed shall hold the office until a successor to such office has been appointed by the county commissioners.

COUNTY BOARD OF HEALTH.

SECTION 259. BOARD; HOW COMPOSED. There is hereby established a county board of health, composed of a president, vice president and superintendent. The state's attorney in each county shall be president of the county board. The board of county commissioners shall appoint some person who is a resident of the county for vice president; and it shall also appoint a superintendent of public health for the county who shall be learned in medicine and hold a license to practice medicine and surgery within the state, and the several persons thus appointed shall hold their offices for two years and until their successors are elected and qualified.

SECTION 260. DUTIES OF OFFICERS OF COUNTY BOARD. The president of each county board of health shall preside at all meetings thereof, and in his absence the vice president shall perform the duties of the president. The county superintendent of health shall be secretary of the board of health of his county. The county superintendent shall keep a record of all the proceedings of the board and of his official acts, and he shall at the end of every month make a full report in writing to the superintendent of public health of the proceedings of the county board of public health and of his official acts, and shall whenever the health of persons or domestic animals is endangered or whenever any contagious or infectious disease occurs in his county, either among persons or domestic animals, immediately report the same to the superintendent of public health.

SECTION 261. MEETINGS OF THE COUNTY BOARD OF HEALTH. The several county boards of health shall meet at the county seat of their respective counties at such times within thirty days after the appointment of the county superintendent of health as he may designate. Notice of the time and place of such meeting shall be by him given to the other members of the county board at least five days prior to such meeting and thereafter the board shall meet at the county seat as often as every three months.

SECTION 262. POWERS AND DUTIES OF THE COUNTY BOARD OF HEALTH. The several county boards of health shall have power within their respective counties, outside of the corporate limits of cities having a city board of health, and the superintendent of public health, to do and perform all the things mentioned in subdivisions 3, 4, 5, 6, 7 and 8 of section 255. All expenses actually and necessarily paid or incurred by the county board of health in carrying out

the provisions of this article shall be audited by the county board and certified by county commissioners and shall be paid the same as other county expenses are paid.

SECTION 263. POWERS AND DUTIES OF SUPERINTENDENT. The county superintendent of health shall have charge of and superintend, subject to the approval of the board of which he is a member and the supervisory control of the state board of health, all the matters and things mentioned in subdivisions 4, 5, 6 and 7 of section 255 within his county and in case of immediate danger to the health of persons or of domestic animals he may act as in his judgment he deems best, without consultation of the other members of the board, for the prevention of such danger, and shall immediately report such action to the president of the board and to the superintendent of public health.

SECTION 264. COMPENSATION. The president and vice president of the board shall receive three dollars per day for every day in which they may be actually and necessarily traveled in the performance of his duties. The county superintendent of health shall receive five dollars per day for every day for which he may be actually and necessarily engaged in the performance of his duties. Physicians employed by the county board of health shall not receive less than two dollars per visit for medical attendance upon any patient and not to exceed ten cents per mile for each mile actually and necessarily traveled in visiting such patients. No member of such board of health shall receive any other or further compensation for his services than as herein provided.

SECTION 265. BOARDS OF HEALTH HERETOFORE ESTABLISHED NOT AFFECTED. Nothing contained in this article shall in any manner affect any board of health heretofore established in any city, village or incorporated town; provided, however, that all such boards of health shall be under the supervision and control of the state board.

TOWNSHIP BOARDS OF HEALTH.

SECTION 3116. WHO CONSTITUTE. POWERS OF. The supervisors of each township, and the trustees of each incorporated village shall constitute a board of health and within their respective townships or villages shall have and exercise all the powers necessary for the preservation of public health.

SECTION 3117. POWERS OF THE BOARD OF HEALTH. The board of health may examine into all nuisances, sources of filth and causes of sickness and make such regulations respecting the same as it may judge necessary for the public health and safety of the inhabitants; and each person who violates any order or regulation made by any board of health and duly published is guilty of a misdemeanor and is punishable by a fine not exceeding one hundred dollars, or by imprisonment in the county jail not exceeding three months.

SECTION 3118. PUBLIC NOTICES OF ORDERS AND REGULATIONS. Notice shall be given by the board of health of all orders and regulations made by it by publishing the same in some newspaper, if there is one published in such township or the county; if there is none, then by posting such notice in five public places therein; and such publication of said orders and regulations shall be deemed a legal notice to all persons.

SECTION 3119. PENALTY FOR REFUSAL TO OBEY ORDER. Whenever any nuisance, source of filth or cause of sickness is found on private property, the board of health shall order the owner or occupant thereof at his own expense to remove the same within twenty-four hours; and if the owner or occupant thereof neglects so to do he shall forfeit a sum not exceeding fifty dollars, to be recovered in the name of and for the use of the township.

SECTION 3120. PROCEEDINGS ON SUCH REFUSAL. Whenever such owner or occupant shall fail to comply with such order of the board of health said board may cause the said nuisance, source of filth, or cause of sickness to be removed, and all expense incurred thereby shall be paid by such owner or occupant or by the person causing or permitting the same.

SECTION 3121. BOARD TO ENTER INFECTED PREMISES. PROCEEDINGS IF OPPOSED. Whenever the board of health deems it necessary for the preservation of the health of its inhabitants to enter any building or vessel in the township for the purpose of examining into and destroying, removing or preventing any nuisance, source of filth, or cause of sickness, and shall be refused such entry, any member of the board may make complaint under oath to a justice of the peace of his township, stating the facts in the case so far as he has knowledge thereof.

SECTION 3122. WARRANT TO BE ISSUED BY JUSTICE. Such justice shall thereupon issue a warrant directed to the sheriff or any constable of the county, commanding him to take sufficient aid, and *being* accompanied by two or more members of the board of health, *between* the hours of sunrise and sunset, to repair to the place where *such* nuisance, source of filth or cause of sickness complained of *may be*, and destroy, remove or prevent the same under the direction of *the* members of such board of health.

SECTION 3123. QUARANTINE OF INFECTIOUS PERSONS. When any person coming from abroad, or residing in any city, town or village in this state is infected or lately has been infected with the smallpox or other contagious disease dangerous to the public health the board of health of the city, town or village where such sick or infected person is, may immediately cause such person to be removed to a separate house if it can be done without danger to his health and shall provide for such person a nurse, medical attendance and other necessities, which shall be a charge in favor of such city, town or village against the person so provided for, his parents,

guardian of master, if able, or otherwise against the county to which he belongs, or the state if such person is a non-resident of the state.

SECTION 3124. SAME. WHEN PERSON CANNOT BE MOVED. If such infected person cannot be removed without danger to his health, the board shall make provisions as directed in the preceding section for such person in the house where he may be, and in such case it may cause the persons in the neighborhood to be removed; and may take such other measures as it deems necessary for the safety of the inhabitants.

SECTION 3125. BOARD TO PROVIDE HOSPITAL. When a disease dangerous to the public breaks out in any township, the board shall immediately provide such hospital or place of reception for the sick and infected as it judged best for their accommodation and the safety of the inhabitants, which shall be subject to the regulations of the board, and the board may cause any sick and infected person to be removed thereto, unless his condition will not permit such removal without danger to his health, in which case the house or place where he remains shall be considered as a hospital, and with all its inmates subject to the regulations of the board.

CITY BOARD OF HEALTH.

SECTION 266 CITY BOARD, HOW CONSTITUTED. There is hereby established in each incorporated city in this state a board of health, which shall be constituted as follows: The mayor of such city shall at the first meeting of the city council in April in each year appoint four aldermen, who, together with the city engineer and the health officer as hereinafter provided, shall constitute a board of health and shall have and exercise the powers conferred upon such board by law and by the ordinances of such city.

SECTION 267. HEALTH OFFICER. DUTIES. SALARY. At the first meeting of the city council in April of each odd numbered year there shall be appointed by the mayor and confirmed by the council one health officer, who shall hold his office for two years and until his successor is appointed and qualified. He shall be a competent physician in regular practice and shall perform such duties as may be devolved upon him by law or by the ordinances of such city. Before entering upon the duties of his office he shall take the usual oath of office and give a bond to be approved by the city council in the sum of one thousand dollars, conditioned for the faithful performance of his duties, and shall receive such compensation as the city council may determine.

SECTION 268. LOCAL BOARDS OF HEALTH. DUTIES OF. Each city board of health shall perform the duties and exercise the powers herein provided within the limits of the city for which it is established. Each county board of health and city board of health shall be known as the local board of health.

SECTION 269. **BOARDS TO MAKE SANITARY REGULATIONS.** Each local board of health, within its jurisdiction, may examine into all nuisances, sources of filth and causes of sickness, and make such regulations regarding the same as it may judge necessary for the public health and safety of the inhabitants; and every person who shall violate any published order or regulation made by any board of health, shall be guilty of a misdemeanor and punished by a fine not exceeding one hundred dollars, or by imprisonment in the county jail not exceeding thirty days, or both.

SECTION 270. **REGULATIONS PUBLISHED.** Notice shall be given by each local board of health of all general orders and regulations made by them, by publishing the same in some newspaper, if there is one published within the jurisdiction of such board; if there is none, then by posting such orders and regulations in five public places therein, and such publication of such orders and regulations shall be deemed a legal notice to all persons.

SECTION 271. **NUISANCE. OWNER TO REMOVE.** When ever any nuisance, source of filth or cause of sickness is found on private property any member of the local board of health may order the owner or occupant thereof, at his own expense to remove the same within twenty-four hours, and such order may be given to such owner or occupant personally or left at his usual place of abode.

SECTION 272. **BOARD TO-ACT IN DEFAULT OF OWNER.** Whenever such owner or occupant shall fail to comply with the order of the board, it may cause such nuisance, source of filth or cause of sickness to be removed and all the expenses incurred thereby shall be paid by such owner or occupant, or by such other person as has caused or permitted the same.

SECTION 273. **COMPLAINT TO JUSTICE, WHEN.** Whenever any local board of health shall deem it necessary for the preservation of the health of the public within its jurisdiction to enter any building or vessel within such jurisdiction for the purpose of examining into and examining, removing or preventing any nuisance, source of filth or cause of sickness, and shall be refused entrance any member of the board may make complaint to the justice of the peace, within the jurisdiction of the board, stating the facts in the case so far as he has knowledge thereof.

SECTION 274. **JUSTICE TO ISSUE WARRANT.** Such justice shall *thereupon* issue a warrant directed to the sheriff or other peace *officer,* commanding him to take sufficient aid and accompanied by *at least* one member of the board of health, between the hours of *rise* and sunset to have such nuisance, source of filth or cause of *business* destroyed, removed or prevented under the direction of *such* of the board of health as accompanied him.

SECTION 275. **ANY PHYSICIAN TO REPORT CASES OF CONTAGION.** Whenever it shall come to the knowledge of any physician or other person that a contagious or epidemic or infectious disease exists

within the jurisdiction of any local board in writing the name and place of residence, if known, of every person afflicted with such disease, and if he is the attending physician of each person he shall report not less than twice in each week the condition of each person as afflicted and the state of such disease.

SECTION 276. DUTY OF PHYSICIANS IN CASE OF DEATH. It shall be the duty of each physician in this state to report in writing to the local board of health the death of each of his patients, who shall have died within the jurisdiction of such board of any contagious or infectious or epidemic disease. Such report shall be made within twenty-four hours after such death and shall state the specific name and character of such disease.

SECTION 277. KEEPER OF HOUSE TO REPORT. Each keeper of any private house, boarding house, lodging house, inn or hotel shall report in writing to the local board of health within whose jurisdiction the same may occur each case of contagious, infectious or epidemic disease which may occur in his house, inn or hotel; such report shall be made within twenty-four hours after the existence of such disease shall become known to such person, and shall state the name of each person afflicted with such disease and the nature thereof.

SECTION 278. REMOVAL OF SICK PERSON. No person shall without a permit from the local or state board of health carry or caused to be removed from without this state, or from one building to another within this state, or from or to any car or vessel, any person afflicted with any contagious or infectious or epidemic disease, or the body of any person who died of such disease.

SECTION 279. VACCINATION REQUIRED, WHEN. Each parent or guardian having the care, custody or control of any minor or other person shall cause such minor or other person to be vaccinated.

SECTION 280. DUTY OF SCHOOL OFFICIALS. No principal, superintendent or teacher of any school, and no parent or guardian of any minor child, shall permit any child having scarlet fever, diphtheria, smallpox, whooping cough, measles, or any other contagious, infectious or dangerous disease, or any child residing in any house where such disease exists or has recently existed to attend any public or private school until the local board of health shall have given permission therefor.

SECTION 281. BURIAL. CASE OF CONTAGION. REGULATIONS. No person shall allow to be unburied the body of any human being for a longer time than four days, or, when death has been caused by an infectious or contagious disease, for a longer time than twenty-four hours after death of such person without a permit from the local board of health, which permit shall specify the length of time during which said body may be unburied. In all cases where death has been caused by an infectious or contagious disease, the

body shall, if directed by said board, be immediately disinfected as may be directed by it. If the body remains unburied for more than twenty-four hours it shall be immediately enclosed in a tightly sealed metallic coffin which shall not thereafter be opened and the funeral of such person shall be strictly private. In the removal of such person for burial or otherwise, or other vehicles shall be employed as may be authorized by said board and no undertaker or other person shall prepare for burial or bury the body of any human without a certificate signed by the attending physician or by the coroner, which certificate shall state the name, age, sex and place of abode and date of death of such deceased person, the name and duration of disease of which such person died and whether or not such disease is contagious and such certificate shall after the burial of such body, be filed with the local board of health, and whenever any such body shall be presented to any common carrier within the state for transportation by such carrier, it shall be accompanied by a duplicate of such certificate signed by such attending physician or coroner; and no common carrier shall receive any such body for transportation unless the certificate shall state that the disease of which such person died is not contagious, which duplicate shall be firmly attached to and remain upon the outside of the coffin or other receptacle containing such dead body.

SECTION 282. INFECTED PERSONS. REMOVAL OF. It shall be the duty of each local board of health, whenever it shall come to its knowledge that a case of smallpox, scarlet fever, diphtheria or other contagious or infectious disease exists within its jurisdiction, immediately examine into the case, and if such appears to be a disease of the character herein specified, such boards shall adopt such quarantine and sanitary measures as in its judgment tend to prevent the spread of such disease, and may immediately cause any person infected with such disease to be removed to a separate house, if in the opinion of the health officer or superintendent of public health, such person can be removed without danger to his health, and if such infected person cannot be removed without danger to his health, the local board of health shall make such quarantine regulations as it may deem necessary, with reference to the house within which such infected person is, and in such cases may cause the person to be removed from that neighborhood and take such measures as it deems necessary for the safety of the inhabitants, and shall immediately notify the state board of health of the existence and nature of such disease and the measures adopted by it with reference thereto.

SECTION 283. TEMPORARY HOSPITAL. Each local board of health may provide such temporary hospital or place of retention for the persons afflicted with infectious or contagious diseases as it judges best for their accommodation and the safety of the inhabitants, and all such hospitals and private hospitals and other places

in which exists any contagious or infectious disease shall, during the existence of such disease be under the control and subject to the regulations of the local board of health, and all the inmates of such house or other place during the existence of such disease therein must conform to the regulations and obey the instructions of the local board of health thereto.

SECTION 284. INFECTED CLOTHING, ETC. DESTRUCTION OF. Any local board of health may cause to be destroyed any bed, or bedding, clothing, carpets or other articles which may have been exposed to infection from such infectious or contagious disease, and may allow reasonable compensation for the same, or may provide a proper place with all necessary apparatus and attendants for the disinfection of such articles, and cause all such articles to be disinfected thereby, and may provide a carriage for the conveyance of such articles or of such persons suffering from such contagious or infectious disease.

SECTION 285. BOARD HAS FULL POWER. Local boards of health may employ such persons as may be necessary to carry into effect the provisions of this article, and the regulations established by them, and such physicians as they deem necessary, and provide such necessities of life as in their judgment may be needed for the maintenance, welfare and comfort of persons afflicted with contagious and infectious diseases. All expenses incurred by any local board of health in carrying into effect the provisions of this article, and in providing for the care and maintenance of such sick persons, and all expenses incurred under any of the provisions of this article shall be audited and allowed by the board incurring the same; such expenses in case of township boards of health shall be certified to the township clerk and paid out of the general fund of the township, and in case of city boards of health shall be certified by the city auditor and paid out of the general fund of the city, and in case of county boards of health the same shall be certified by the county auditor and paid out of the general fund of the county.

SECTION 286. EXPENSE, WHO CHARGEABLE. All expenses incurred by such boards of health for the care, medical attendance or support of any sick person, shall be a charge upon such person and upon the person legally chargeable with the support of such person, and may be collected by suit in the name of the township, city or county which shall have incurred such expense; provided, however, that in case where after due investigation, such township or city board of health is satisfied that such sick person or the person charged legally with the support of such person is too poor to pay the expenses incurred in his behalf, then and in such cases the local board of health shall make indorsement to such effect on the bill of expenses incurred in such a case, and the clerk of the township or the auditor of the city shall send a certified statement of such bill of expense with the indorsement of such local board

of health to the county auditor. Such statement shall contain the date upon which such claims were allowed, to whom allowed, for what purpose and the amount allowed, and an itemized statement of the expenses incurred. Upon receipt of such statement the county auditor shall refer the same to the county board of health, and if approved by the county board of health, the county auditor shall issue his warrant upon the county treasurer, payable out of the general fund of the county, the amount allowed by the township or city. Such warrant shall be made payable to the treasurer of such township or city, as the case may be.

SECTION 287. NEGLIGENCE OF DUTY HEREIN. PENALTY. Any health officer, superintendent of public health or any member of any local board of health, who shall neglect or refuse to perform any of the duties required to be performed by him under the provisions of this article or neglects or refuses to conform to any rules, regulations or measures adopted by the local board of health within whose jurisdiction he shall at that time be and which shall have been published, or shall have come to his knowledge, or refuses or neglects promptly to obey any orders, directions or instructions given to him by such board of health, shall be guilty of a misdemeanor, and upon conviction shall be punishable by a fine of not less than ten dollars or more than fifty dollars, or by imprisonment in the county jail not exceeding one year or both.

COLLECTION OF VITAL STATISTICS.

(Laws of 1907.)

CHAPTER 270.

An Act to Provide for the Immediate Registration of all Births and Deaths Throughout the State of North Dakota, by Means of Certificates of Births and Deaths, and Burial or Removal Permits; to Establish a Bureau of Vital Statistics at the Capitol of the State, and to Insure the Thorough Organization and Efficiency of the Registration of Vital Statistics Throughout the State on the Standard Forms Recommended by the United States Bureau of Census and the American Public Health Association; and Providing Certain Penalties.

Be It Enacted by the Legislative Assembly of the State of North Dakota:

SECTION 1. BUREAU OF VITAL STATISTICS. STATE REGISTRAR.] For the complete and proper registration of births and deaths, for legal, sanitary and statistical purposes, there shall be, and hereby is, created and established a state bureau of vital statistics, to be under the immediate superintendence of the state board of health, and the secretary of said board shall have general supervision over the bureau which is hereby authorized to be established by the board,

and for the purposes of this act he shall be ex-officio state registrar of vital statistics.

SEC. 2. DEPUTY REGISTRAR.] The state registrar may appoint such clerical and other assistants as are necessary for the proper performance of the duties of the office, and fix their compensation within the amount appropriated therefor by the legislature. He shall designate in writing one of his assistants, who shall possess the powers and perform the duties of the state registrar during his absence, illness or disability, or during a vacancy in the office, and he is hereby empowered to make, promulgate and enforce such rules and regulations as he may consider necessary to carry out the provisions of this act. Suitable apartments shall be provided by the custodian of the capitol, in the state capitol at Bismarck, for the bureau of vital statistics, which shall be properly equipped with fire proof vault and filing cases for the safe and permanent preservation of all official records made and returned under this act.

SEC. 3. REGISTRATION DISTRICTS.] For the purpose of this act the state shall be divided into registration districts as follows: Each incorporated village and city and each township, exclusive of any incorporated village or city, shall constitute a primary registration district.

SEC. 4. LOCAL REGISTRARS, DUTIES OF. SUB-REGISTRARS.] The clerk of each township, village or city shall be the local registrar in and for the township, village or city of which he is clerk, and he shall perform all the duties of local registrar as hereinafter provided, and he shall immediately appoint in writing a deputy, who shall be authorized to act in his stead in case of absence, illness or disability; provided, that in unorganized townships the state registrar may appoint suitable persons as local registrars, and when it may appear necessary for the convenience of the people in any township, the local registrar is hereby authorized, with the approval of the state registrar, to appoint one or more suitable and proper persons to act as sub-registrars, who shall be authorized to receive certificates and to issue burial or removal permits in and for such portions of the township as may be designated and each sub-registrar shall note the date each certificate was filed over his signature, and forward all certificates to the registrar of the township within ten days, and in all cases before the third day of the following month; provided, that all sub-registrars shall be subject to the supervision and control of the state registrar, and may be by him removed for neglect or failure to perform their duties in accordance with the provisions of this act, or the rules and regulations of the state registrar, and they shall be liable to the same penalties for neglect of duties as the local registrar.

SEC. 5. REGISTRATION OF BIRTHS.] All births that occur in the state shall be immediately registered in the districts in which they occur, as hereinafter provided.

SEC. 6. REGULATION OF BURIALS] The body of any person whose death occurs in the state shall not be interred, deposited in a vault or tomb, cremated or otherwise disposed of, or removed from or into any registration district until a permit for burial or removal shall have been properly issued by the registrar of the registration district in which the death occurs, and no such burial or removal permit shall be issued by the registrar until a complete and satisfactory certificate and return of the death has been filed with him, as hereinafter provided; provided, that in case of any death outside of the state, where the body is accompanied by a removal or transit permit issued in accordance with the law and the health regulations in force where the death occurred, such removal or transit permit may be accepted as of the same authority as a permit from the local registrar.

SEC. 7. STILL-BORN CHILDREN TO BE REGISTERED.] Still-born children, or those dead at birth, shall be registered as births, also as deaths, and a certificate of both the birth and the death shall be filed with the local registrar in the usual form and manner, the certificate of birth to contain, in place of the name of the child, the words "still-born." The medical certificate of the cause of death shall be signed by the attending physician, and shall state the cause of death as "still-born," with the cause of still-birth, if known; whether a premature birth, and if born prematurely, the period of uterogestation in months, if known, and a burial or removal permit in the usual form shall be required.

SEC. 8. DEATH CERTIFICATE, FORM OF.] The certificate of death shall be of the standard form recommended by the bureau of the census of the American Health association, and shall contain the following items:

1. Place of death, including state, county, township or town, city or village. If in a city, the ward, street and house number. If in a hospital or other institution, the name of the same to be given instead of the street and house number.

2. Full name of decedent. If an unnamed child, the surname preceded by "unnamed."

3. Sex.

4. Color or race, as white, black (negro or negro descent), Indian, Chinese, Japanese or other.

5. Conjugal condition, as single, married, widowed or divorced.

6. Date of birth, including the year, month and day.

7. Age in years, months and days.

8. Place of birth, state or foreign country.

9. Name of father.

10. Birthplace of father; state or foreign country.

11. Maiden name of mother.

12. Birthplace of mother, state or foreign country.

13. Occupation, the occupation to be reported of any person who had any remunerative employment, women as well as men.

14. Signature and address and informant.
15. Date of death, including year, month and day.
16. Statement of medical attendance on decedent, fact and time of death, including the time last seen alive.
17. Cause of death, including the primary and immediate causes and contributory causes or complications, if any, and the duration of each.
18. Signature and address of physician or official making the medical certificate.
19. Special information concerning deaths in hospitals and institutions, and of persons dying away from home, including the former or usual residence, length of time at place of death and place where the disease was contracted.
20. Place of burial or removal.
21. Date of burial or removal.
22. Signature and address of undertaker.
23. Official signature of registrar, with date when certificate was filed and registered number.

The personal and statistical particulars (items 1 to 13) shall be authenticated by the signature of the informant, who may be any competent person acquainted with the facts. The statement of facts relating to the disposition of the body shall be signed by the undertaker or person acting as such. The medical certificate shall be made and signed by the physician, if any, last in attendance on the deceased, who shall specify the time in attendance, the time he last saw the deceased alive, the hour of the day at which the death occurred; and he shall further state the cause of death so as to show the course of disease or sequence of causes resulting in death, giving the primary and immediate causes and also the contributory causes, if any, and the duration of each. Indefinite and unsatisfactory terms indicating only symptoms of disease or conditions resulting from disease will not be held sufficient for issuing a burial or removal permit, and any certificate containing only such terms, as defined by the state registrar, shall be returned to the physician for correction and definition. Causes of death which may be the result of either disease or violence, shall be carefully defined, and if from violence, its nature shall be stated, and whether accidental, suicidal or homicidal. And in case of deaths in hospitals, institutions or away from home, the physician shall furnish the information required under this head (item 19), and shall state where, in his opinion, the disease was contracted, and the cause of death and all other facts required shall in all cases be stated in accordance with the rules and regulations of the state registrar.

SEC. 9. DEATH WITHOUT MEDICAL ATTENDANCE, DUTY OF UNDERTAKER.] In case of any death occurring without medical attendance it shall be the duty of the undertaker to notify the registrar

of such death, and when so notified the registrar shall inform the local health officer and refer the case to him for immediate investigation and certification, prior to issuing the permit; provided, that when the local health officer is not a qualified physician, or when there is no such official, and in such cases only, the registrar is authorized to make the certificate and return from the statement of relatives or other persons having adequate knowledge of the facts; provided, further, that if the circumstances of the case render it probable that the death was caused by unlawful or suspicious means, the registrar shall then refer the case to the coroner for his investigation and certification.

SEC. 10. DUTIES OF UNDERTAKERS.] The undertaker or person acting as undertaker, shall be responsible for obtaining and filing the certificate of death with the registrar and securing a burial or removal permit prior to any disposition of the body. He shall obtain the personal and statistical particulars required from the person best qualified to supply them over the signature and address of his informant. He shall then present the certificate to the attending physician, if any, or to the health officer or coroner, as directed by the registrar, for the medical certificate of the cause of death, and other particulars necessary to complete the records, as specified in section 8, and he shall then state the facts required relative to the date and place of burial, over his signature and with his address, and present the completed certificate to the registrar within the time limit, if any, designated by the local board of health for the issuance of a burial or removal permit. The undertaker shall deliver the burial permit to the sexton or person in charge of the place of burial before interring the body, or attach the removal permit to the box containing the corpse, when shipped by any transportation company, to accompany same to destination, when it shall be accepted by the sexton as authority for the interment of the body.

SEC. 11. BURIAL PERMIT, FORM OF.] If the interment or other disposition of the body is to be made in the registration district in which the death occurred, the wording of the burial permit may be limited to a statement by the registrar, and over his signature, that a satisfactory certificate of death having been filed with him as required by law, permission is granted to inter, remove or otherwise dispose of the body of the deceased, stating the name, age, sex, cause of death, and other necessary details upon the form prescribed by the state registrar. But in case the interment or other disposition of the body is to be made in some other registration district other than that in which the death occurred, a complete copy of the certificate of death shall be attached to and made a part of the permit.

SEC. 12. DUTY OF SEXTONS. RECORD.] No sexton or person in charge of any premises in which interments are made shall inter or permit the interment of any body unless it is accompanied by a

burial, removal or transit permit as herein provided, and each sexton or person in charge of any burial ground shall indorse upon the permit the date of interment over his signature, and shall return all permits, so indorsed, to the local registrar of his district within ten days from the date of interment, or within the time (limited) by the local board of health. He shall also keep a record of all interments made in the premises under his charge, stating the name of the deceased person, place of death, date of burial, and the name and address of the undertaker, which record shall at all times be open to public inspection.

SEC. 13. CERTIFICATE OF BIRTH, FILED WHEN AND BY WHOM.] It shall be the duty of the attending physician or midwife to file the certificate of birth properly and completely filled out, giving all the particulars required by this act, with the local registrar of the district in which the birth occurred, within three days after the date of birth, and if there be no attending physician or midwife, then it shall be the duty of the father of the child, householder, or owner of the premises, manager or superintendent of public or private institution in which the birth occurred, to file said certificate of birth with the local registrar within three days after birth.

SEC. 14. FORM OF CERTIFICATE.] The certificate shall be of the standard form recommended by the bureau of the census and shall contain the following items:

1. Place of birth, including state, township or town, village or city. If in a city the ward, street and house number. If in a hospital or other institution the name of the same to be given instead of the street and house number.

2. The full name of child. If the child dies without a name before the certificate is filed, enter the words "died unnamed." If the living child has not been named at the date of filing the certificate of birth, the space for "full name of child" is to be left blank, to be filled out subsequently by the supplemental report as hereinafter provided.

3. Sex of child.

4. Whether a twin, triplet or other plural birth. A separate certificate shall be required for each child of plural birth, giving number of child in order of birth.

5. Whether legitimate or illegitimate.

6. Full name of father.

7. Residence of father.

8. Color or race of father.

9. Birthplace of father at last birthday.

10. Age of father at last birthday, in years.

11. Occupation of father.

12. Maiden name of mother, in full.

14. Color or race of mother.

15. Birthplace of mother.

16. Age of mother at last birthday, in years.
17. Occupation of mother.
18. Number of child of this mother, and number of children of this mother now living.

19. Certificate of attending physician or midwife as to attendance at birth, including statement of year, month, day and hour of birth, and whether the child was dead or living at birth. This certificate shall be signed by the attending physician or midwife, with date of signature and address. If there is no physician or midwife in attendance, then the father of the child, householder or owner of the premises, or manager or superintendent of public or private institution, or other competent person whose duty it shall become to file the certificate of birth as required by section 13 of this act, shall draw a line through the words "I hereby certify that I attended at the birth of above child" and write in lieu thereof the words "no physician or midwife," filling out the remainder of the certificate in regard to the year, month, day and hour of birth, and signing the certificate as father, householder, owner of premises, manager or superintendent of institution, as the case may be, with his address.

20. Exact date of filing in office of local registrar, attested by his official signature and registered number of birth, as hereinafter provided.

All certificates, either of birth or death, shall be written legibly in unfading black ink, and no certificate shall be held to be complete and correct that does not supply all the items of information called for therein or satisfactory account for their omission.

SEC. 15. SUPPLEMENTAL REPORT GIVING NAME OF CHILD.] When any certificate of birth of a living child is presented without statement of the given name, then the local registrar shall make out and deliver to the informant a special blank for the supplemental report of the given name of the child, which shall be filled out as directed, and returned to the registrar as soon as the child has been named. The original certificate of birth shall not be considered complete until the supplemental report is filed or the blanks returned with the state "died unnamed."

SEC. 16. PHYSICIANS, MIDWIVES AND UNDERTAKERS TO BE REGISTERED.] Every physician, midwife and undertaker shall, without delay, register his or her name, address and occupation with the local registrar of the district, or may hereafter establish a residence, and shall thereupon be supplied by the local registrar with a copy of this act, together with such rules and regulations as may be prepared by the state registrar relative to its enforcement. Within thirty days after the close of each calendar year each local registrar shall make a return to the state registrar of all the physicians and midwives who have been registered in this district during the whole or any part of the preceding calendar year, and in certifying names for the

payment of certificates of birth filed, the state registrar shall not include any physicians or midwives who have not complied with the requirements of this section; provided, that no fee or other compensation shall be charged by the local registrars to physicians, midwives and undertakers for registering their names under this section, or making returns thereof to the state registrar.

SEC. 17. HOSPITALS TO KEEP RECORDS.] All superintendents or managers or other persons in charge of hospitals, lying-in or other institutions, public or private, to which persons resort for treatment of disease, confinement or are committed by process of law, are hereby required to make a record of all personal and statistical particulars relative to the inmates in their institution at the date of approval of this act, that are required in the form of certificate herein provided for, as directed by the state registrar, and thereafter such record shall be by them made for all future inmates at the time of admission, and in case of persons admitted or committed for medical treatment of disease the physician in charge shall specify for entry in the record, the nature of the disease, and where, in his opinion, it was contracted. The personal particulars and information required by this section shall be obtained from the individual himself, if it is practical to do so, and when they cannot be obtained, they shall be secured in as complete a manner as possible from the relatives, friends or other persons acquainted with the facts.

SEC. 18. BLANKS AND FORMS FURNISHED BY THE STATE REGISTRAR.] The state registrar shall prepare, print and supply all registrars all the blanks and forms used in registering, recording and preserving the returns, or in otherwise carrying out the purpose of this act, and shall prepare and issue such detailed instructions as may be required to secure the uniform observance of its provisions and the maintenance of a perfect system of registration, and no other blanks shall be used than those supplied by the state registrar. He shall carefully examine the certificates received monthly from the local registrars, and if any such are incomplete or unsatisfactory, he shall require such further information to be furnished as may be necessary to make the records complete and satisfactory, and all physicians and midwives, informants or undertakers connected with any case, and all other persons having knowledge of the facts are hereby required to furnish such information as they may possess regarding any birth or death, upon demand of the state registrar, in person, by mail, or through the local registrar. He shall further arrange, bind and permanently preserve the certificates in a systematic manner, and shall prepare and maintain a comprehensive and continuous card index of all births and deaths registered, the card showing the name of the child or deceased, place and date of birth or death, number of certificate, and the volume in which it is contained. He shall inform all registrars what diseases are to be considered infectious, contagious, or communicable and dangerous

to the public health, as decided by the state board of health, in order that when deaths occur from such diseases proper precautions may be taken to prevent the spreading of dangerous diseases.

SEC. 19. LOCAL REGISTRARS TO CORRECT RETURNS.] It shall be the duty of the local registrar to supply blank forms of certificates to such persons as require them, and he shall carefully examine each certificate of birth or death when presented for record to see that it has been made out in accordance with the provisions of this act and the instructions of the state registrar, and if any certificate of death is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return and to withhold issuing the burial or removal permit until they are corrected. If the certificate of death is properly executed and complete, he shall then issue a burial or removal permit to the undertaker; provided, that in case of the death occurring from any disease that is held by the state board of health to be infectious, contagious or communicable and dangerous to the public health, no permit for the removal or other disposition of the body shall be granted by the registrar except under such conditions as may be prescribed by the state and local boards of health. If a certificate of birth is incomplete he shall immediately notify the informant and require him to supply the missing items, if they can be obtained. He shall then number consecutively the certificates of birth and of death in two separate series, beginning with "number one" for the first birth and first death in each calendar year, and to sign his name as registrar in attest to the date of filing in his office. He shall also make a complete and accurate copy of each birth and death certificate registered by him, upon a form identical with the original certificate, to be filed and permanently preserved in his office as the local record of such death, in such manner as directed by the state registrar, and he shall on the fifth day of each month, transmit to the state registrar all original certificates registered by him during the preceding months, and if no births and no deaths occur in any month he shall, on the fifth day of the following month, report the fact to the state registrar in such a manner as the state registrar shall direct.

SEC. 20. FEES FOR REGISTRARS.] Each local registrar shall be entitled to be paid the sum of twenty-five cents each for each birth and each death certificate properly and completely made out and registered with him, and correctly copied and duly returned by him to the state registrar, as required by this act; provided, that in cities in which the city clerk or health officer, acting as registrar, receives a fixed salary in lieu of fees, no further compensation shall be paid for the duties required by this act. In case no births or deaths were registered during any month, the local registrar shall be entitled to be paid the sum of twenty-five cents for each report to that effect promptly made in accordance with the directions of the state registrar. All amounts payable to registrars under pro-

visions of this section shall be paid by the county in which the registration districts are located upon certification by the state registrar, and the state registrar shall annually certify to the auditors of the several counties the numbers of births and deaths registered with the names of the local registrar and amounts due each at the rate fixed herein.

SEC. 21. CERTIFIED COPIES OF RECORD OF BIRTHS AND DEATHS, FEES FOR.] The state registrar shall, upon request, furnish any applicant a certified copy of the record of any birth or death registered under provisions of this act, for the making and certification of which he shall be entitled to a fee of fifty cents to be paid by the applicant, and any such copy of the record of a birth or death, when properly certified by the state registrar to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records, when no certified copy is made, the state registrar shall be entitled to a fee of fifty cents for each hour or fractional hour of time of search, to be paid by the applicant, and the state registrar shall keep a true and correct account of all fees by him received under these provisions, and turn the same over to the state treasurer.

SEC. 22. PENALTY FOR FAILURE TO COMPLY WITH THE LAW.] If any physician who was in medical attendance upon any deceased person at the time of death shall neglect or refuse to make out and deliver to the undertaker, sexton or other person in charge of the interment, removal or other disposition of the body, upon request, the medical certificate of cause of death hereinbefore provided for, he shall be fined not less than five dollars nor more than fifty dollars, and if any physician shall willfully and knowingly make a false certification of the cause of death in any case, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than fifty dollars nor more than two hundred dollars, and any physician or midwife in attendance upon a case of confinement, or any other person charged with responsibility for reporting births, in the order named in section 13 of this act, who shall neglect or refuse to file a proper certificate of birth with the local registrar within the time required by this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars. If any undertaker, sexton or other person acting as undertaker, shall inter, remove or otherwise dispose of the body of any deceased person without having received a burial or removal permit as herein provided, he shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than twenty dollars nor more than one hundred dollars. Any registrar, deputy registrar, or sub-registrar who shall neglect or fail to enforce the provisions of this act in his district or shall neglect or refuse to perform any of the duties imposed upon him by this act, or by the instructions or directions of the state

registrar, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than ten dollars or more than one hundred dollars. Any person who shall wilfully alter any certificate of birth or death, or the copy of any certificate of birth or death, on file in the office of the local registrar, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than ten dollars or more than one hundred dollars, or be imprisoned in the county jail not exceeding sixty days or suffer both fine and imprisonment in the discretion of the court. Any other person or persons who shall violate any of the provisions of this act, or shall wilfully neglect or refuse to perform any duties imposed upon them by the provisions of this act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five dollars or more than one hundred dollars. Any transportation company or common carrier transporting or carrying, or accepting through its agents or employes for transportation or carriage, the body of a deceased person without an accompanying permit issued in accordance with the provisions of this act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars or more than two hundred dollars; provided, that in case the death occurred outside the state and the body is accompanied by a certificate of death, burial or removal, or transit permit, issued in accordance with the law or board of health regulation in force where the death occurred, such death certificate, burial, or removal, or transit permit may be held to authorize the transportation or carriage of the body into or through the state.

SEC. 23. ENFORCEMENT OF LAW, WHO CHARGED WITH.] Local registrars are hereby charged with strict and thorough enforcement of the provisions of this act in their districts, under the provision and direction of the state registrar. They shall make an immediate report to the state registrar of any violation of this law coming to their notice by observation or upon complaint of any person, or otherwise. The state registrar is charged with the thorough and efficient execution of the provisions of this act in every part of the state, and with supervisory powers over local registrars to the end that all of these requirements shall be uniformly complied with. He shall have authority to investigate cases of irregularity or violation of law, personally or by accredited representative, and all registrars shall aid him, upon request in such investigation. When he shall deem it necessary, he shall report cases of violation of any of the provisions of this act to the prosecuting attorney or official of the proper county or municipality with a statement of the facts and circumstances, and when any such case is reported to them by the state registrar, all prosecuting attorneys, or officials acting in such capacity, shall forthwith initiate and promptly follow up the necessary court proceedings against the parties responsible for the

alleged violations of the law and upon request of the state registrar the attorney general shall likewise assist in the enforcement of the provisions of this act.

SEC. 24. COUNTY AUDITOR TO FURNISH NAMES OF TOWNSHIP CLERKS.] It is hereby made the duty of each county auditor to furnish, after each township election, the name of the clerk of each organized township within his county, with his post office address, to the state registrar of vital statistics; and any auditor who shall willfully neglect or refuse to furnish such names shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than ten dollars nor more than fifty dollars.

SEC. 25. REPEAL.] All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

Approved March, 19, 1907.

STATE BOARD OF EMBALMERS.

(Revised Code 1905.)

SEC. 340. GOVERNOR TO APPOINT.] The governor shall appoint the president and the secretary of the state board of health, and three persons who shall be practical and practicing embalmers in the state, who shall constitute a state board of embalmers. One of the embalmers so appointed shall hold office for two years, one for three years and one for four years, unless sooner removed. Appointments to fill vacancies caused by death, resignation, or removal before the expiration of terms, shall be made for the residue of such terms by the governor and all the appointments to fill vacancies caused by the expiration of terms shall be made in same manner and shall be for a period of four years.

SEC. 341. OATH OF OFFICE.] The members of said board, before entering upon their duties shall respectively take and subscribe the oath required by other state officers, which shall be filed in the office of the secretary of state, who is hereby authorized to administer same. They shall have power to elect out of their own number a president, secretary and treasurer, and shall adopt such regulations for the transaction of the business of the board and the management of its affairs, as they may deem expedient. The members of such board shall receive no salary as such, except the secretary, who shall receive fifty dollars a year for his services; but the actual traveling and necessary expenses of the board and its members shall be paid, but only out of the receipts as hereinafter directed.

SEC. 342 MEETINGS OF BOARD.] Such board shall meet at least once a year, and may also hold special meetings as frequently as the proper and efficient discharge of its duties shall require, at the time and place to be fixed by the rules and by-laws of the board, and the rules and by-laws of the board shall provide for the giving of timely

notice of all meetings to every member of the board and to all applicants for license. Three of the members shall at any meeting constitute a quorum for the transaction of business.

SEC. 343. BOARD TO EXAMINE CANDIDATES.] The members of this board, or such number thereof as shall be designated by said board, shall examine candidates for license on the subjects of embalming, and care, disposition and preservation of deceased persons, also on the subject of sanitation for the prevention and spread of infectious and contagious diseases, in accordance with the rules of the state board of health. And they shall adopt such rules and regulations for the disinfection of dead bodies, their bedding, clothes and surroundings, as they shall think proper and shall cause such rules to be made known to every person engaged in the profession of embalming, and the business of undertaker. And it is the intention that this board shall be an aid to the state board of health.

SEC. 344. LICENSE ISSUED, WHEN.] Every person who wishes to practice the profession of embalming the bodies of persons having died by any infectious or contagious disease in the state of North Dakota or prepare for shipment the body of any person having died of any contagious or infectious disease, shall appear before the state board of embalmers, or such member thereof designated, as hereinbefore provided, for examination on their knowledge of embalming, sanitation and preservation of the dead, disinfection of a deceased person and the apartments, bedding, clothing, excretion and anything likely to be affected in case of death from infectious or contagious diseases, in accordance with the rules and regulations of the state board of health. Such examination shall be in writing and all examination papers shall be kept on record by said state board of embalmers; and if the applicant be of good moral character and passes a satisfactory examination, then the said board shall issue to said applicant, on payment of a sum of five dollars to the treasurer of said board, a license to practice the profession of embalming for a term of one year. If the applicant desires the renewal of the license, the said board shall grant it except for cause, and the annual fee for the renewal of the license shall not exceed three dollars.

SEC. 345. SEAL. LICENSES.] Said board is hereby authorized to adopt and use a common seal, and any transcript of any matter of record in the office of said board, with the certificate of the secretary there of attached, under the seal of said board, shall be competent evidence of such matter of record in any court in this state. All licenses shall be signed by a majority of the state board of embalmers and attested by its seal, and shall specify by name the person to whom issued. Every such license shall be non-assignable and non-transferable, and shall be displayed by such embalmer in a conspicuous place in his or her office or place of business.

SEC. 346. PENALTY FOR VIOLATION.] Any person who shall practice or hold himself or herself out as practicing the art of embalming the dead in accordance with the provisions of section 344, without having complied with the provisions of said section, shall be guilty of a misdemeanor, and, upon conviction thereof before any court of competent jurisdiction, shall be sentenced to pay a fine of not less than fifty or more than five hundred dollars, or undergo an imprisonment of not exceeding one year, or both, at the discretion of the court, for each and every offense, but the penalties of this section named shall not be enforced until after an examination of applicants has been held under the provisions of this article.

SEC. 347. FEES PAID TO TREASURER. BOND OF.] All fees collected and fines paid under the provisions of this article shall be paid to the treasurer of the state board of embalmers, to be used for the purpose of defraying the necessary expenses, and the treasurer of the state board shall give bond in the sum of five hundred dollars to the approval of said board for the honest and faithful discharge of his duties.

SEC. 348. REPORT.] It shall be the duty of said state board on or before the first Monday in November of each and every year to make a report in writing to the governor of the state containing a detailed statement of the nature of the receipts and the manner of the expenditures and balance of the money remaining at the end of the year after the payment of the necessary expenses, including the salary of the secretary and the traveling and other expenses of the members of the board, incurred in the discharge of their duties as such may be used by the state board of embalmers for educational purposes in their profession.

PURE DRUG LAW.

(H. B. No. 84—Treat.)

AN ACT to Prevent the Adulteration, Misbranding and Selling of Adulterated and Insufficiently Labeled Drugs or Medicines, Restricting or Prohibiting the Sale of Certain Drugs, Prescribing a Penalty for the Violation Thereof, Providing for the Inspection, Testing and Analyzing of Said Drugs and Medicines Charging the North Dakota Experiment Station with the Duty Thereof, and Charging the States Attorney with the Enforcement Thereof.

Be it enacted by the Legislative Assembly of the State of North Dakota:

SECTION 1. ADULTERATING AND LABELING DRUGS.] It shall be unlawful for any person, his agent or servant, or while acting as agent or servant of any other person or corporation, to manufacture for sale, offer for sale or sell within this state any drug which is adulterated within the meaning of this act.

SEC. 2. DRUGS DEFINED.] The term "drugs" as used in this act shall include all medicines for internal and external use, antiseptics, disinfectants, washes, perfumes and cosmetics.

SEC. 3. WHAT CONSTITUTES ADULTERATION.] A drug shall be deemed to be adulterated:

First—If, when sold under or by a name recognized in the United State Pharmacopoeia or the National Formulary, official at the time, it differs from the standard of strength, quality or purity prescribed therein, unless the order therefor requires an article inferior to such standard or unless such difference is made known or so appears to the purchaser at the time of the sale.

Second—If, when sold under or by a name not recognized in the United States Pharmacopoeia or the National Formulary, but which is found in some other pharmacopoeia or other standard work on materia medica, it differs materially from the standard of strength, quality or purity described in such work.

Third—If the strength, quality or purity falls below the professed standard under which it is sold.

Fourth—If it be an imitation of or offered for sale under the name of another article, or if it be falsely labeled in any respect with regard to its composition, properties, uses or place of manufacture, or if it bear any design which shall deceive or tend to deceive;

Provided, that a drug or medicine shall not be deemed adulterated in the following case:

First—If the standard of strength or purity of any drug has been raised since the issue of the last addition of the United States Pharmacopoeia or of the National Formulary, no prosecution relative to it shall be maintained until such change of standard has been published throughout the commonwealth.

SEC. 4. DRUGS AND MEDICINES TO BE LABELED.] Every proprietary product, drug, medicine or beverage containing any alcohol, morphine, opium, heroine, alpha or beta eucaine, chloroform, cannabis indica, chloral, hydrate, bromine, iodine, acetanilid, or croton oil, or of any derivation or preparation of any such substance contained therein shall be clearly labeled in plain, open gothic letters printed on a white background, showing the name, the proportion or percentage of each of the foregoing constituents, and said facts shall all be set forth on the face or principal label, and separate from other statements, and in such a way as to be clearly seen.

SEC. 5. COCAINE, HOW SOLD.] No product or preparation shall be sold, offered for sale, or given away which contains cocaine or any of its salts or derivatives, and no delivery of cocaine or its salts shall be made in this state except upon the written prescription of a licensed physician, dentist or veterinarian, and said prescriptions shall not be refilled. Any druggist violating this section of the act shall forfeit his license.

SEC. 6. METHYL ALCOHOL PROHIBITED.] It shall be unlawful to sell, offer or expose for sale, or to have in possession any preparation or product intended for the use of man, either for internal or external purposes including washes and perfumes, which contain methyl alcohol or wood spirits.

SEC. 7. PHYSICIANS' PRESCRIPTIONS TO BE FILLED.] Nothing in this act shall be so construed as to in any way interfere with the written prescription of any regularly licensed physician or with the filling of the same by a licensed druggist.

SEC. 8. PENALTY FOR SO DOING.] Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor and shall for the first offense be punished by a fine of not less than five dollars or more than one hundred dollars, and all necessary costs, including the expense of analyzing such adulterated articles when said person has been found guilty under this act, and all such adulterated or misbranded articles may by order of the court be seized and destroyed.

SEC. 9. DUTY OF STATE'S ATTORNEY.] It shall be the duty of the attorney general and the state's attorney to prosecute all persons violating any of the provisions of this act when the evidence thereof has been presented by the North Dakota government agricultural experiment station as provided for in Sections 11 and 12 of this act.

SEC. 10. NORTH DAKOTA EXPERIMENT STATION TO INSPECT AND ANALYZE DRUGS AND MEDICINES.] The North Dakota government agricultural experiment station shall make analysis of drugs and medicines found on sale in North Dakota suspected as being adulterated, at such times and places and to such extent as it may determine, and may appoint such agent or agents as it may deem necessary for the enforcement of the provisions of this act, and such agent or agents shall have free access and egress at all reasonable hours for the purpose of examining into any place wherein it is suspected any drug or medicine adulterated with any deleterious or foreign ingredient or which falls below the standard of purity, or where such ingredient exist, and such agent or agents upon tendering the market price of said article may take from any person, firm or corporation, samples of any article suspected of being adulterated as aforesaid.

SEC. 11. FACTS, HOW TRANSMITTED.] Whenever said station shall find by its analysis that adulterated drugs have been on sale in this state, or that said drugs are in violation of this act, it shall forthwith transmit the facts so found to the attorney general and to the state's attorney of the county in which said adulterated products were found.

SEC. 12. CERTIFICATE AS EVIDENCE.] Every certificate duly signed and acknowledged by the chemist of the North Dakota government agricultural experiment station at Fargo, relating to the

analysis of any drug, drug products, or medicines, shall be prima facie evidence of the facts herein stated.

SEC. 13. STATION TO MAKE ANNUAL REPORT.] The said station shall make an annual report to the governor upon the work done under this act and said report may be included in the report which said station is already authorized by law to make to the governor. Said station is further authorized to publish and distribute bulletins giving the results of such analyses and investigations as have been made under authority of this act.

SEC. 15. REPEAL.] All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 16. EMERGENCY.] Whereas, an emergency exists, since inadequate protection is afforded against the sale of cocaine and other narcotics, therefore this act shall take effect and be in force from and after its approval.

Approved March 13, 1907.

PURE FOOD LAW.

S. B. No. 57—Hanna.

Session 1907.

AN ACT to Prevent the Adulteration and Misbranding of Foods and Beverages, the Selling of Adulterated and Unwholesome Foods and Beverages, and Providing for the Proper Labeling of all Foods and Beverages.

Be it enacted by the Legislative Assembly of the State of North Dakota:

SECTION 1. ADULTERATING AND MISBRANDING FOODS AND BEVERAGES.] It shall be unlawful for any person, either himself or while acting as agent or servant for any other person or corporation, to manufacture for sale, sell, offer or to have for sale, to solicit orders for, to store or to deliver within the state any article of food or beverage which is unwholesome, misbranded, adulterated or insufficiently labeled within the meaning of this act. The having in possession of such adulterated, unwholesome, misbranded or insufficiently labeled article or articles, shall be deemed as prima facie evidence of the violation thereof. For the purpose of this act all condiments, extracts, vinegars, or other substances used in the preparation or compounding of foods or food products and beverages shall be deemed as articles of food.

SEC. 2. WHAT CONSTITUTES ADULTERATION.] Any article of food or beverage shall be considered as misbranded, unwholesome, adulterated or insufficiently labeled within the meaning of this act:

1. If it contains any form of aniline dye or other coal tar dye, or if colored (and not in violation of clause six of this section) with

a harmless vegetable dye and the name thereof is not given on the label thereof.

2. If it contains formaldehyde, benzoic acid, sulphurous acid, boric acid, salicylic acid, hydrofluoric acid, saccharin, benaphthol, or any salt or antiseptic compound derived from these products, or other deleterious ingredient.

3. If any substance or substances have been mixed with it so as to reduce or lower or injuriously affect its quality or strength or food value so that such article of food or beverage when offered for sale shall deceive or tend to deceive the purchaser.

4. If any inferior or cheaper substance or substances have been substituted wholly or in part for the articles so that the product when sold shall deceive or tend to deceive the purchaser.

5. If any necessary or valuable constituent of the article has been in whole or part abstracted.

6. If it be an imitation of or offered for sale under the specific name of another article.

7. If it is labeled, branded, colored, coated, or stained, whereby damage or inferiority is concealed, so as to deceive or mislead the purchaser, or if it be falsely labeled in any respect.

8. If it consists wholly or in part of a diseased, decomposed filthy or putrid animal or vegetable substance or if such substance or substances be used in the preparation thereof, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter.

9. If every package, bottle or container does not bear the true net weight, the name of the real manufacturer or jobbers and the true grade or class of the product, the name to be expressed on the face of the principal label in clear and distinct English words in black type on a white back ground, said type to be in size uniform with that used to name the brand or producer.

Provided, that an article of food or beverage shall not be deemed adulterated in the following cases:

1. If it be a compound or mixture of recognized food products not included in definitions 6 and 8 of this section, and if it be properly labeled or tagged to comply with the other provisions of section two.

2. In the cases of candies and chocolates, if they contain no terra alba, barytes, talc, chrome yellow, or other mineral substances or aniline dyes or other coal tar dyes or other poisonous colors, flavors or products detrimental to health.

3. If, in the case of baking powders or any mixture or compound intended for use as a baking powder they have affixed to each and every box, can or package containing such powder or like mixture or compound, a light colored label upon the outside and on the face of which there is distinctly printed with black ink and in clear legible type the name and address of the manufacturers, the true

and correct analysis, and in a form to be prescribed by the North Dakota government agricultural experiment station, of each and all the constituents or ingredients contained in or contributing a part of such baking powders or mixture or compound intended for use as a baking powder. The label shall bear no advertising or descriptive matters other than the name of the manufacturer, composition as prescribed for the above, and directions for use.

4. In the case of perishable goods put up in bulk, sodium benzoate or other less harmful preservatives may be used in proportion not to exceed one part in two thousand in such product and under such regulations as may be determined upon and proclaimed by the North Dakota agricultural government experiment station at Fargo. This clause shall not be applicable to any case at any time where products can be commercially produced without the use of chemical preservatives. When the use of preservatives is permitted the fact shall be clearly set forth on the face label in a form and manner to be prescribed by the North Dakota government agricultural experiment station at Fargo.

SEC. 3. PENALTY FOR SO DOING.] Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and shall for each offense be punishable by a fine of not less than twenty-five dollars or more than one hundred dollars, and all necessary costs, including the expenses of analyzing such adulterated articles when said person has been found guilty under this act. Products found to be adulterated within the meaning of this act may by order of the court be seized and ordered destroyed.

SEC. 4. DUTY OF STATE'S ATTORNEY.] It shall be the duty of the attorney general and the state's attorney to prosecute all persons violating any of the provisions of this act when the evidence thereof has been presented by the North Dakota government agricultural experiment station as provided for in sections seven and eight of this act.

SEC. 5. THE NORTH DAKOTA EXPERIMENT STATION TO INSPECT AND ANALYZE FOODS AND BEVERAGES.] The North Dakota government agricultural experiment station shall make analysis of food products and beverages on sale in North Dakota suspected of being adulterated, at such times and places and to such extent as it may determine and may appoint for the enforcement of the terms a commissioner and such other agent or agents as it may deem necessary, and the sheriffs of the respective counties of the state are hereby appointed and constituted agents for the enforcement of this act, and such commissioner, agent or agents and sheriff shall have free access at all reasonable hours, for the purpose of examining into any place wherein it is suspected any article of food or beverage adulterated with any deleterious or foreign ingredient or ingredients exist, and such commissioner, agents or sheriff, upon tendering the market price of said article may take from any person,

firm or corporation samples of any article suspected of being adulterated as aforesaid, and the station may adopt or fix standards of purity, quality or strength when such standards are not specified or fixed by the statute.

SEC. 6. CITIZEN MAY SEND SAMPLE OF FOOD OR BEVERAGE FOR ANALYSIS.] Any citizen of the state may, by prepaying transportation charges, send any article of manufactured food, or food product, or beverage in the original package to said station to be analyzed, and such article, if not before analyzed, shall be analyzed and included in the next bulletin or report of the station as provided for in section 9 of this act.

SEC. 7. FACTS, HOW TRANSMITTED.] Whenever said station shall find by its analysis that adulterated, misbranded or insufficiently labeled food products or beverages have been on sale in this state, it shall forthwith transmit the facts so found to the attorney general and to the state's attorney of the county in which said food product was found.

SEC. 8. CERTIFICATES OF EVIDENCE.] Every certificate duly signed and acknowledged by the chemist of the North Dakota government agricultural experiment station at Fargo relating to the analysis of any food, food product, or beverage, shall be presumptive evidence of the facts therein stated.

SEC. 9. STATIONS TO MAKE ANNUAL REPORT.] The said station shall make an annual report to the governor upon adulterated food products, and said report may be included in the report which the said station is already authorized by law to make to the governor and the said station is further authorized to publish or cause to be printed from time to time such bulletins as are found necessary for setting forth the results of analysis and investigations made under this act, and in June and December of each year the said station shall furnish to the auditor of each county in the state a certified list of all adulterated foods, food products and beverages as found by such analysis, showing the name and brand of the article, the manufacturer, and the reason for classing the same as illegal. The county auditor of each county shall cause the said list to be printed in the official papers of each county. Said publications shall be made in July and January shall continue for two successive issues, to be paid for by such county at the rate allowed by law for publishing the proceedings of the board of county commissioners.

SEC. 10. DUTY OF SHERIFF ON PRESENTATION OF COMPLAINT OF VIOLATION OF THIS ACT. COMPENSATION.] It is hereby made the duty of the sheriff of any county of this state, on presentation to him of a verified complaint of the violation of any provision of this act, to at once proceed to obtain by purchase a sample of the adulterated food, food product or beverage complained of and forward the same to the said station for analysis, marking the package or wrapper containing the same for identification with the name

of the person from whom procured, the date of which the same was procured, and the substance therein contained. For his services hereunder the said sheriff shall be allowed the same fees for travel as are now allowed by law to sheriffs on service of criminal process, together with such compensation as may be by the county commissioners of his county deemed reasonable, and all amounts expended by him in procuring and transmitting the said samples, which fees and amount expended shall be audited and allowed by the said commissioners and paid by said county as other bills of said sheriff.

SEC. 11. NO ACTION IN COURT.] No action shall be maintained in any court in this state on account of any sale or other contract made in violation of this act.

SEC. 12. REPEAL.] All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 13. EMERGENCY.] Whereas, an emergency exists in that the title to the present food law is imperfect, and inadequate protection is afforded against the sale of short weight goods, therefore this act shall take effect and be in force from and after its passage and approval.

Approved March 8, 1908.



VITAL STATISTICS



BIRTHS BY COUNTIES FOR BIENNIAL PERIOD
Giving Sex and Parentage.

COUNTIES	Total	SEX		PARENTAGE				
		Male	Female	Native	Foreign	Foreign Father American Mother	American Father Foreign Mother	Unknown
Barnes	598	321	277	242	186	102	62	6
Benson	136	67	69	59	47	19	4	7
Billings	69	34	35	47	7	5	3	7
Bottineau	487	253	234	313	90	45	26	13
Burleigh	328	170	158	191	73	30	27	7
Cass	590	289	301	236	152	140	56	6
Cavalier	260	141	119	86	117	42	13	2
Dickey	77	38	39	22	12	4	5	34
Eddy	125	65	60	59	44	12	5	5
Emmons	403	205	198	120	218	34	14	17
Foster	21	10	11	15	2	3	1	0
Grand Forks	686	348	338	264	218	127	66	11
Griggs	148	81	67	66	47	19	16	0
Hettinger	54	27	27	40	9	5	0	0
Kidder	71	35	36	36	17	12	6	0
LaMoure	206	100	106	98	61	27	18	2
Logan	99	49	50	35	53	7	3	1
McHenry	376	205	171	173	83	62	33	25
McIntosh	242	136	106	38	164	32	8	0
McKenzie	57	26	31	26	13	6	2	10
McLean	205	93	112	89	56	29	20	11
Mercer	8	5	3	1	7	0	0	0
Morton	332	166	166	151	122	29	30	0
Nelson	116	62	54	48	41	19	7	1
Oliver	15	9	6	12	2	1	0	0
Pembina	296	152	144	61	160	48	26	1
Pierce	147	73	74	66	43	16	5	17
Ramsey	126	69	57	60	30	14	11	2
Ransom	177	82	95	94	38	30	13	2
Richland	262	130	132	132	69	46	12	3
Rolette	137	74	63	44	48	22	22	1
Sargent	140	84	56	50	44	19	7	20
Stark	393	218	175	180	136	32	28	17
Steele	236	120	116	100	66	34	36	0
Stutsman	492	220	272	227	156	48	48	13
Trail	134	61	73	50	46	30	6	2
Towner	109	52	57	61	17	12	7	12
Walsh	370	215	155	113	151	64	24	18
Ward	558	289	269	297	126	80	48	7
Wells	110	54	56	47	41	12	8	2
Williams	334	173	161	158	68	40	28	40
Total	9730	5001	4729	4207	3089	1358	754	322

DEATHS FROM ALL CAUSES FOR BIENNIAL PERIOD

Giving Nationality and Conjugal State.

CAUSE	Native	Foreign	Single	Married	Widowed	Total
Typhoid fever	92	48	85	47	8	140
Smallpox	7	0	5	2	0	7
Measles	12	0	12	0	0	12
Scarlet fever	52	3	50	5	0	55
Whooping cough	29	0	29	0	0	29
Diphtheria	95	6	94	7	0	101
Croup	15	4	16	3	0	19
Cholera and dysentery	1	1	2	0	0	2
Erysipelas	3	2	2	1	2	5
Septicemia	22	8	20	9	1	30
Tuberculosis	149	157	153	129	24	306
Venereal diseases	2	4	2	3	1	6
Cancer and tumors	49	73	13	71	38	122
Rheumatism	18	7	9	11	5	25
Diabetes	13	7	6	11	3	20
Anemia, Luekemia, etc.	11	4	7	8	0	15
Alcoholism	5	8	5	8	0	13
Encephalitis and meningitis	101	12	98	11	4	113
Diseases of spinal cord	7	4	4	7	0	11
Apoplexy	26	33	10	33	16	59
Paralysis	16	16	7	18	7	32
General paralysis of insane	6	4	2	3	5	10
Other forms of mental disease	11	8	7	9	3	19
Epilepsy and convulsions	78	5	70	9	4	83
Tetanus	4	2	3	3	0	6
Other diseases of nervous system.	9	5	5	5	4	14
Pericarditis and Endocarditis	21	27	15	25	8	48
Heart disease	78	57	57	63	15	135
Angina pectoris	1	6	1	5	1	7
Diseases of arteries and veins	12	1	3	7	3	13
Other diseases of circulatory system	2	2	2	2	0	4
Laryngitis	3	1	4	0	0	4
Bronchitis	25	8	24	7	2	33
Pneumonia	219	70	212	61	16	289
Pleurisy	4	4	3	3	2	8
Congestion of lungs	2	5	4	2	1	7
Asthma and Emphysema	4	16	5	6	9	20
Hemorrhage of lungs and other conditions	11	5	8	7	1	16
Tonsillitis	3	1	3	1	0	4
Ulcer of stomach	6	7	4	5	4	13
Gastritis	13	10	14	5	4	23
Other diseases of stomach	4	0	4	0	0	4
Diarrhoea and Enteritis	140	9	142	4	3	149
Hernia and obstruction of intestines	29	14	29	11	3	43
Other diseases of intestines	19	3	15	4	3	22
Hydatid tumor of liver	0	1	0	0	1	1
Cirrhosis of liver	3	7	1	9	0	10
Other diseases of liver	17	8	10	13	2	25

DEATHS FROM ALL CAUSES—Continued.

CAUSE	Native	Foreign	Single	Married	Widowed	Total
Diseases of spleen	1	0	0	1	0	1
Peritonitis	29	28	29	14	14	57
Appendicitis	29	12	29	12	0	41
Other diseases of digestive system	1	2	2	0	1	3
Diseases of urinary system	72	45	37	61	19	117
Diseases of genital system	7	3	1	8	1	10
Puerperal septicemia	20	15	5	30	0	35
Puerperal convulsions	3	0	0	3	0	3
Other causes incident to childbirth	24	24	3	45	0	48
Diseases of skin	4	4	3	1	4	8
Diseases of bones	3	4	4	1	2	7
Congenital malformations	12	0	12	0	0	12
Premature birth	86	0	86	0	0	86
Congenital debility and inanition .	149	0	149	0	0	149
Suicides and homicides	15	16	12	16	3	31
Accidents	155	82	150	68	19	237
Ill-defined diseases	154	74	139	69	20	228
Still births	165	0	165	0	0	165
Old age	30	103	15	47	71	133
Total	2411	1092	2117	1029	357	3503

DEATHS FROM ALL CAUSES FOR THE SEVERAL LIFE PERIODS

For Biennial Period.

	Males	Females	Total
Under one year	476	389	865
From 1 to 2.....	66	62	128
From 2 to 5.....	93	94	187
From 5 to 10.....	71	80	151
From 10 to 15.....	77	50	127
From 15 to 20.....	83	72	155
From 20 to 25.....	117	90	207
From 25 to 30	87	86	173
From 30 to 40.....	159	122	281
From 40 to 50.....	145	89	234
From 50 to 60.....	147	85	232
From 60 to 70.....	120	100	220
From 70 to 80.....	89	94	183
From 80 to 90.....	61	48	109
From 90 to 100.....	8	7	15
From 100 to 105.....	2	1	3
Age not given	111	124	235
Total	1,912	1,593	3,505

REPORT OF BIRTHS AND ALSO REPORT OF DEATHS FROM ALL CAUSES BY COUNTIES
For First Six Months of 1908.

COUNTY	Jan.		Feb.		Mar.		Apr.		May		June		Total	
	B	D	B	D	B	D	B	D	B	D	B	D	B	D
Barnes	10	0	4	4	26	12	27	8	44	12	40	11	151	47
Benson	10	5	9	0	17	9	12	1	11	4	6	2	65	26
Billings	0	0	0	0	1	1	7	0	4	1	1	0	13	2
Bottineau	6	2	4	0	30	9	27	14	14	8	20	2	101	35
Burleigh	1	1	10	8	27	9	9	5	16	5	15	7	78	35
Cass	30	8	20	7	48	16	43	23	49	20	64	40	254	114
Cavalier	0	9	9	2	19	2	31	3	21	6	37	9	117	31
Dickey	4	0	1	3	2	1	4	2	11	2	4	5	26	13
Dunn	0	0	0	0	0	1	0	0	1	0	1	0	2	1
Eddy	2	0	2	0	6	0	2	0	2	1	8	9	22	10
Emmons	19	13	12	5	15	7	13	3	11	7	22	2	92	37
Foster	1	0	1	1	4	0	7	0	2	5	5	2	20	8
Grand Forks	15	4	17	4	33	12	31	13	43	19	26	29	165	81
Griggs	1	0	3	0	4	0	13	1	10	1	13	7	44	9
Hettinger	6	0	1	0	3	0	4	2	8	0	9	4	31	6
Kidder	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LaMoure	10	6	8	12	23	1	13	5	8	3	18	0	80	27
Logan	5	0	8	2	3	1	9	1	9	1	4	1	38	6
McHenry	5	0	12	1	17	6	15	4	9	4	9	9	67	24
McIntosh	10	0	7	4	14	3	10	3	15	3	12	7	68	20
McKenzie	0	0	0	0	4	0	2	0	2	1	5	0	15	1
McLean	0	0	1	0	4	0	7	0	3	3	9	4	24	9
Mercer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morton	2	1	2	2	5	2	9	1	10	4	0	0	28	10
Nelson	8	3	9	5	12	4	8	2	14	2	16	3	67	19
Oliver	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pembina	2	1	5	5	17	12	24	5	14	4	32	10	94	37

REPORT OF BIRTHS AND ALSO REPORT OF DEATHS FROM ALL CAUSES, BY COUNTIES—Continued.

COUNTY	Jan.		Feb.		Mar.		Apr.		May		June		Total	
	B	D	B	D	B	D	B	D	B	D	B	D	B	D
Ramsey	8	4	12	3	20	4	19	4	17	0	10	0	86	15
Pierce	1	0	0	3	10	2	3	2	7	2	8	9	29	18
Ransom	2	0	2	0	5	4	5	6	6	0	5	3	25	13
Richland	6	0	8	2	29	17	20	10	19	13	19	6	101	48
Rolette	0	0	0	0	6	3	2	1	3	2	16	0	27	6
Sargent	1	0	4	1	5	4	6	6	5	1	17	5	37	17
Stark	2	2	14	10	19	9	15	5	9	2	16	3	75	31
Steele	2	2	3	3	9	2	11	6	20	4	19	5	64	22
Stutsman	16	4	14	2	35	15	20	1	15	4	26	9	126	35
Towner	2	2	3	0	11	1	6	2	7	1	15	0	44	6
Trail	1	0	0	1	8	1	12	1	6	4	6	4	33	11
Ward	13	0	25	2	38	30	60	19	48	17	49	22	233	90
Wells	1	0	0	0	1	0	1	1	4	1	5	0	12	2
Walsh	7	3	3	0	15	12	28	6	24	17	27	6	104	44
Williams	2	0	0	0	4	1	13	4	13	3	14	6	46	14
Total	211	70	235	97	549	213	548	172	534	187	628	241	2705	980

CONTAGIOUS DISEASES

For Biennial Period.

The columns under each heading show the number of cases reported in the first and second years respectively.

Counties	Tuberculosis		Diphtheria		Typhoid Fever		Scarlet Fever		Measles		Smallpox		Whooping Cough		Other Infectious Diseases		Total
Barnes	13	11	9	47	61	62	4	29	11	7	16	90	15	0	32	68	475
Benson	4	1	1	3	0	0	4	35	0	10	18	7	0	0	0	0	83
Billings	0	0	2	9	0	0	2	0	0	0	1	0	0	1	1	0	15
Bottineau	8	4	3	24	9	2	13	3	28	0	7	47	0	0	0	0	150
Burleigh	8	1	8	4	12	0	18	2	15	6	2	7	1	1	6	1	94
Cass	10	2	13	30	5	1	13	9	3	0	59	138	0	0	4	4	291
Cavalier	3	1	5	0	0	0	0	0	0	0	0	0	1	0	5	0	15
Dickey	1	1	1	0	1	0	0	0	0	0	0	0	0	0	5	0	8
Eddy	2	0	12	6	1	0	2	4	0	0	0	3	0	0	3	5	61
Emmons	8	9	50	43	23	1	29	39	18	31	1	2	19	3	31	182	489
Foster	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Forks	6	9	18	45	6	3	4	23	7	0	16	30	15	0	6	0	188
Griggs	4	4	3	18	7	3	2	3	36	1	16	8	0	0	2	0	107
Hettinger	0	0	0	14	0	0	0	0	0	0	0	17	0	0	0	0	31
Kidder	2	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	6
LaMoure	0	1	0	9	0	0	4	2	43	0	0	9	0	0	1	0	99
Logan	2	1	0	0	0	0	0	1	0	11	0	4	0	0	0	0	33
McHenry	1	3	5	4	4	1	0	34	0	0	6	1	2	0	9	2	72
McIntosh	0	0	5	10	1	3	7	0	13	0	0	32	0	0	2	0	73

CONTAGIOUS DISEASES.—Continued.

COUNTIES	Tubercu- losis	Diphtheria	Typhoid Fever	Scarlet Fever	Measles	Smallpox	Whooping Cough	Other in- fectious diseases	Total
McKenzie	1	0	0	0	0	0	8	1	19
McLean	4	4	1	19	4	10	0	0	94
Mercer	0	0	0	6	0	0	0	0	6
Morton	4	10	3	12	98	36	70	3	301
Nelson	1	0	0	6	0	10	0	0	36
Oliver	0	0	0	6	0	0	0	0	2
Pembina	6	17	0	0	0	9	0	6	62
Pierce	0	0	4	9	4	7	0	3	49
Ramsey	3	0	2	0	0	5	4	2	113
Ransom	2	2	10	0	0	2	0	0	16
Richland	3	16	3	1	0	4	0	2	37
Rolette	0	0	4	3	3	12	0	0	37
Sargent	1	7	3	0	69	11	1	0	95
Stark	6	56	25	5	48	24	54	0	364
Steele	1	21	81	0	2	15	1	3	73
Stutsman	10	38	1	31	0	51	0	0	265
Towner	3	0	4	10	0	7	0	1	12
Trail	8	8	0	27	3	0	0	1	100
Ward	9	3	4	5	2	25	2	9	163
Wells	2	4	2	25	4	26	6	0	227
Walsh	9	1	0	13	1	4	1	7	106
Williams	3	5	10	16	44	3	2	8	238
Total	148	323	310	249	455	393	194	153	4706

DEATH STATISTICS

For the Biennial Period According to the Bertillon International Classification, figured on a basis of 500,000 Population.

Classification No.	Cause of Death	Sex		Number of Deaths	Death Rate Per 1,000
		Male	Female		
	All causes	1,912	1,593	3,505	7.01
	I. Epidemic diseases	198	172	370	.74
	Typhoid fever	79	61	140	.28
1	Typhoid-malarial fever				
2	Typhus fever				
3	Relapsing fever				
4	Malarial fever				
5	Smallpox	3	4	7	.014
6	Measles	5	7	12	.024
7	Scarlet fever	29	26	55	.11
8	Whooping cough	16	13	29	.058
9	Diphtheria	53	48	101	.202
9	Croup	6	4	10	.02
9	Membranous croup	4	5	9	.018
10	Influenza				
11	Miliary fever				
12	Asiatic cholera		1	1	.002
13	Cholera nostras		1	1	.002
14	Dysentery				
15	Bubonic plague				
16	Yellow fever				
17	Leprosy				
18	Erysipelas	3	2	5	.01
19	Chicken pox				
19	German measles				
19	Mumps				
	II. Other general diseases	274	263	537	1.074
20	Septicemia	19	11	30	.06
21	Glanders				
22	Malignant fever				
23	Rabies				
24	Actinomycosis				
25	Pellagra				
	<i>Tuberculosis</i>	144	162	306	.612
26	Larynx	1		1	.002
27	Lungs	128	142	270	.54
28	Meninges	6	11	17	.034
29	Abdominal	2	4	6	.012
30	Pott's disease	1		1	.002
31	Tuberculosis abscess	1		1	.002
32	White swelling				
33	Other organs	1	1	2	.004
34	General	4	4	8	.016
35	Scrofula				

DEATH STATISTICS.—Continued.

Classification No.	Cause of Death	Sex		Number of Deaths	Death Rate Per 1,000
		Male	Female		
36					
38	Venereal diseases	5	1	6	.012
	<i>Cancer</i>	60	60	120	.24
39	Mouth	3	2	5	.01
40	Stomach and liver	20	21	41	.082
41	Intestines	9	7	16	.052
42	Genital organs .....	.....	7	7	.014
43	Breast .....	.....	3	3	.006
44	Skin .....	.....	1	1	.002
45	Other organs	28	19	47	.094
46	Tumors .....	.....	2	2	.004
47					
48	Rheumatism	12	13	25	.05
49	Scurvy				
50	Diabetes	15	5	20	.04
51	Exophthalmic goiter				
52	Addison's disease				
53					
54	Anemia, luekemia	6	8	14	.028
55	Other general diseases .....	.....	1	1	.002
56	Alcoholism	13	.....	13	.026
57					
59	Chronic poisonings				
	III. Diseases of Nervous System...	193	154	347	.694
60	Encephalitis	9	1	10	.02
61	Meningitis	54	49	103	.206
62	Locomotor ataxia	7	2	9	.018
63	Other diseases of spinal cord .....	.....	2	2	.004
64	Apoplexy	40	19	59	.118
65	Softening of the brain	1	.....	1	.002
66	Paralysis	16	16	32	.064
67	General paralysis of insane	6	4	10	.020
68	Other forms of mental disease	7	7	14	.028
74	Other diseases of the brain	2	2	4	.008
69	Epilepsy	9	3	12	.024
70					
71	Convulsions	31	40	71	.142
72	Tetanus	6	.....	6	.012
75					
76	Other diseases of nervous system	5	9	14	.028
	IV. Diseases of circulatory system..	97	110	207	.414
77	Pericarditis	2	2	4	.008
78	Endocarditis	20	24	44	.088
79	Heart disease	63	72	135	.27
80	Angina pectoris	7	.....	7	.014
81	Diseases of the arteries .....	.....	3	3	.006
82	Embolism and thrombosis	3	6	9	.018
83	Disease of the veins .....	.....	1	1	.002
84	Disease of the lymphatics				

DEATH STATISTICS.—Continued.

Classification No.	Cause of Death	Sex		Number of Deaths	Death Rate Per 1,000
		Male	Female		
85					
86	Other diseases of circulatory system..	2	2	4	.008
	V. Diseases of respiratory system..	207	170	377	.754
	Laryngitis	1	3	4	.008
88	Other disease of larynx				
89	Diseases of the thyroid body				
90	Acute bronchitis	16	13	29	.058
92	Broncho pneumonia	54	35	89	.178
93	Pneumonia	105	95	200	.4
94	Pleurisy	7	1	8	.016
95	Congestion of lungs	4	3	7	.014
96	Gangrene of lungs				
91	Chronic bronchitis	1	3	4	.008
97					
98	Asthma and emphysema	11	9	20	.04
87					
99	Hemorrhage of lungs	8	7	15	.03
	Other diseases of respiratory system..	.....	1	1	.002
	VI. Diseases of digestive system....	200	196	396	.792
100	Diseases of mouth				
101					
102	Tonsilitis	1	3	4	.008
	Other diseases of pharynx				
103	Ulcer of stomach	11	2	13	.026
104	Gastritis	14	9	23	.046
	Other diseases of stomach	2	2	4	.008
	Dentition				
105	Diarrhoea and enteritis (under 2 years)	57	61	118	.236
106	Doarrhoea and enteritis (over 2 years)	18	13	31	.062
108	Hernia	3	1	4	.008
	Obstruction of intestines	18	21	39	.078
107					
109	Other diseases of intestines	12	10	22	.044
110	Acute yellow atrophy of liver				
111	Hydatid tumor of liver	1	.....	1	.002
112	Cirrhosis of liver	7	3	10	.02
113	Biliary calculi	2	.....	2	.004
114	Other diseases of liver	9	14	23	.046
115	Diseases of spleen .....	.....	1	1	.002
116	Peritonitis	21	36	57	.114
117	Other diseases of digestive system ...	1	2	3	.006
118	Appendicitis	23	18	41	.082
	VII. Diseases of genito-urinary system	71	56	127	.254
119	Acute nephritis	7	21	28	.056
120	Bright's disease	56	21	77	.15
121	Other diseases of the kidneys	2	5	7	.014
122	Calculi of the urinary tract .....	.....	1	1	.002
123	Disease of bladder	3	1	4	.008

DEATH STATISTICS.—Continued.

Classification No.	Cause of Death	Sex		Number of Deaths	Death Rate Per 1,000
		Male	Female		
129	Uterine tumor . . . . .	.....	1	1	.002
127					
128					
130	Other diseases of uterus . . . . .	.....	2	2	.004
131	Ovarian tumor . . . . .	.....	2	2	.004
134					
126	Disease of tubes				
132					
133	Other diseases of genito-urinary system	3	2	5	.01
	VIII. Child birth . . . . .	.....	86	86	.17
137	Puerpal septicemia . . . . .	.....	35	35	.07
138	Puerpal convulsions . . . . .	.....	3	3	.006
134					
136					
139					
141	Other causes incident to child birth...	.....	48	48	.096
	IX. Diseases of skin	5	3	8	.016
142	Gangrene	4	2	6	.012
143	Carbuncle				
144	Abscess				
145	Other diseases of skin	1	1	2	.004
	X. Diseases of locomotor system...	5	2	7	.014
146	Disease of bones	5	2	7	.014
147	Disease of joints				
148					
149	Other diseases of locomotor system...				
	XI. Malformations	8	6	14	.028
150	Hydrocephalus	2	2	4	.008
150	Congenital malformation of heart (cyanosis)	2	1	3	.006
150	Other congenital malformations	4	3	7	.014
	XII. Early infancy	143	92	235	.47
151					
153	Premature birth	52	34	86	.17
	Congenital debility	49	28	77	.15
	Inanition	42	30	72	.144
	XIII. Old age	66	67	133	.266
154	Old age	66	67	133	.266
	XIV. Violence	221	47	268	.536
	Suicides	25	3	28	.056
155	Poison	9	1	10	.02
156	Asphyxia				
157	Hanging	2	1	3	.006
158	Drowning				

DEATH STATISTICS—Continued.

Classification No.	Cause of Death	Sex		Number of Deaths	Death Rate Per 1,000
		Male	Female		
159	Fire arms	6	.....	6	.012
160	Cutting instruments	2	.....	2	.004
161	Jumping from high places				
162	Crushing				
163	Other unspecified means	6	1	7	.014
164	<i>Accidents</i>	193	44	237	.47
165	Fractures and dislocations	6	.....	6	.012
167	Burns and scalds	12	10	22	.044
169	Heat and sunstroke				
170	Cold and freezing	7	.....	7	.014
171	Lightning	4	1	5	.01
172	Drowning	17	8	25	.05
174	Inhalation of poisonous gases	9	1	10	.02
175	Other accidental poisonings	6	1	7	.014
166	Accidental gunshot wound	23	.....	23	.046
166	Injuries by machinery	3	.....	3	.006
166	Injuries in mines and quarries				
166	Railroad accidents and injuries	22	.....	22	.044
166	Injuries by vehicles and horses	6	2	8	.016
166	Injuries by electric cars				
166					
168	Suffocation	11	5	16	.032
171					
176	Other accidental injuries	61	16	77	.15
	Injuries at birth	6	.....	6	.012
	<i>Homicides</i>	3	.....	3	.006
176	Homicide	3	.....	3	.006
	XV. Ill-defined diseases	121	107	228	.456
177	Dropsy	5	6	11	.022
178					
179	Heart failure	21	14	35	.070
178					
179	Other ill-defined diseases .....	.....	22	2	.004
178					
179	Unknown (unclassified)	95	85	180	.036
	<i>Stillbirths</i>	103	62	165	.33
	Stillborn	103	62	165	.33

STATE BOARD OF EMBALMERS.

J. W. MAXWELL, President	Grafton, N. Dak.
E. F. GILBERT, Vice President	Casselton, N. Dak.
H. C. FLINT, Treasurer	Jamestown, N. Dak.
J. GRASSICK, M. D., Secretary	Grand Forks, N. Dak.
T. F. Mc CUE, Attorney General	Bismarck, N. Dak.

The State Board of Embalmers of which the president and secretary of the state board of health are ex-officio members has held regular sessions every six months for the examination of candidates for embalmers licenses, and for the transaction of such other business of an official nature as might come before them.

Their financial report for the year ending October 31, 1907, was as follows:

FINANCIAL REPORT FOR THE YEAR ENDING OCTOBER 31, 1907.

1906	RECEIPTS	
Aug. 1, Balance on hand from last report	\$	225.40
1907		
April 23, From H. H. Healy, examination and renewal fees....		355.00
Sept. 12, From J. Grassick, examination and reciprosal transfers		50.00
Total	\$	630.40
1906	DISBURSEMENTS	
Aug. 14, To J. W. Maxwell, delegate to embalmers' convention	\$	75.00
1907		
Apr. 23, To H. H. Healy, salary, mileage, expenses		109.70
Apr. 23, To E. F. Gilbert, mileage and expenses		41.60
Apr. 23, To J. W. Maxwell, mileage and expenses		50.50
Aug. 31, E. F. Gilbert, mileage and expenses		5.00
Aug. 31, J. Grassick, fees to national association		10.00
Aug. 31, J. Grassick, mileage and expenses, etc.		8.00
Apr. 23, J. W. Maxwell, mileage and expenses		19.65
Aug. 23, H. C. Flint, mileage and expenses		8.50
Total	\$	327.95
Balance on hand October 31, 1907	\$	302.45

LICENSED EMBALMERS IN NORTH DAKOTA.

NAME AND ADDRESS	LICENSE No.
Aamoth, John, Park River	62
Anderson, Jake, Edgeley	140
Arsenault, A. J., Williston	159
Argue, F. A., Hamilton	96
Ashley, S. H., Grand Forks	120
Avdal, J. H., Akra	129
Bell, R. A., Enderlin	111
Blackler, W. H., Egeland	131
Bracklesberg, H. P., Mrs., Sherwood	124
Bracklesberg, H. P., Colgan	65
Bodmer, Geo. A.,	95
Bonine, Geo. J., Balfour	44
Borman, M. M., Abercrombie	40
Burgner, Olin C., Dickinson	167
Burnham, E. A., Brookhaven, Miss.	79
Burns, Wm. J., Edinburg	46
Burwell, T. J., Ryder	50
Bushee, R. M., Billings, Mont.	39
Butson, S., Hillsboro	32
Bolander, John, Kenmare	162
Challey, John, Lisbon	118
Chandler, Wm., Grafton	2
Champion, Wm. J. N., Rugby	134
Calnon, John W., Berthold	156
Davis, A. D., Dickinson	101
Davis, A. L., Dickinson	63
Dickinson, Albert, Velva	105
Dodds, Thos., Kenaston	45
Dougherty, J. E., Fargo	52
Dougherty, T. R., Williston	114
Draper, C. E. U., Mandan	33
Dixon, Percival, Rolla	155
Eddy, P. W., Jamestown	102
Edwards, W. M., Larimore	93
Engdahl, A. G., Kenmare	54
Engle, W. G., Enderlin	18
Field, E. G., Bismarck	58
Flint, H. C., Jamestown	36
Folker, Chas., Hannah	84

NAME AND ADDRESS	LICENSE NO.
Gaard, Jacob N., Fargo	34
Garrison, T. S., Elwood, Ind.	142
Gilbertson, E. W., Devils Lake	125
Gile, W. D., Crary	121
Gilbert, E. F., Casselton	72
Goodall, Alonzo, Grand Forks	153
Hammond, M. B., Mott	161
Hanson, Ole, Grafton	3
Hanson, H. O., Harvey	143
Harmon, U. G., Lansford	83
Holbrook, W. J., Rugby	73
Holte, Ralph, Ellendale	89
Howden, R. J., McHenry	85
Hurst, S. Y., Devils Lake	91
Hubbard, Austin W., Minot	163
Heinrichs, F. W., Minneapolis, Minn.	144
Hodgdon, A. S., Donnybrook	128
Irvine, A. H., Linton	119
Johnston, P. R., Milton	110
Johnsgaard, E., Bottineau	100
Johanson, R. B., Hallock, Minn.	77
Johnson, David, Leeds	135
Kayser, Otto, Warwick	139
Kennelly, T. G. C., Mandan	133
Kirchner, G. H., Bowbells	53
Kvalness, N. M., Valley City	48
LaFrance, P. E., Rolla	61
Lestrud, O. A., Park River	103
Lonsbery, B. F., Wahpeton	29
Mallough, M. S., Wimpleton	61
Maxwell, J. W., Grafton	76
McDonald, Don, Grand Forks	1
Mellinger, C. A., Mohall	138
Meeker, H. F., Jamestown	74
Miller, Geo., Drayton	127
Miles, A. F., Silby, S. Dak.	166
Morrison, U. G., Granville	108
Myhre, C. J., Kindred	106
Murphy, John, Rolette	157
Norman, M., Grand Forks	122
Norman, Neil, Grand Forks	37
Neuenschwander, Otto, Fessenden	151
Oakley, Otis H., Bismarck	136
Olnstad, Chas., Willow City	97
Olmstead, W. A., Hannaford	68
Olsen, C. A., Cooperstown	107

NAME AND ADDRESS	LICENSE No.
Olson, L. H., Willow City	56
Olson, H. W., Bowman	70
Olson, C. H., Cando	15
Orr, F. G., Russell	137
Pedeson, Ole, Foston, Minn.	78
Peterson, Theo., Aneta	57
Petrie, G. W., McClusky	86
Pico, Henry, Cavalier	38
Plaincton, H. C., Minot	148
Pringle, E. H., Lisbon	141
Price, H. E., Langdon	165
Pond, Willet C., Grand Forks	94
Powdison, E. O., Wheatland	28
Prentice, W. D., Cogswell	98
Proctor, H. G., Jamestown	88
Phytz, C. W. J., Litchville	82
Raycraft, H. C., Minot	58
Reese, T. N. J., McIntosh, Minn.	69
Rice, J. F., Fargo	24
Robertson, J. O., Carrington	87
Romansen, Benj., Ambrose	99
Ross, Ralph, Calvin	115
Schlumpberger, Al., Marshall, Minn.	64
Scott, Hugh A., Baldwin	109
Sells, Mrs. Eva, Estervan, N. W. T.	55
Shimmen, J. E., Ellendale	112
Sieberlick, J. M., Rugby	146
Specht, F. H., Underwood	147
Steinke, Louis, Forman	164
Somdahl, M., Valley City	80
Steen, C. O., Page	135
Stockstad, O. A., Milnor	116
Stone, F. D., Knox	92
Schmelzer, J. A., Eckman	150
Simmons, E. L., Kenmare	152
Skjold, Egill, Souris	158
Thomas, G. M., Williston	60
Toensing, E. H., Pingree	113
Van Fleet, J. D., Larimore	43
Vaughan, C. F., Wahpeton	123
Washburn, E. D., Hope	81
Weagant, Chas., Minot	147
Wellen, Adolph, Starkweather	41
Whillis, F. M., Lidgerwood	126
Whipple, A. L., Lisbon	66

NAME AND ADDRESS	LICENSE No.
Whipperman, M. A., Hankinson	90
Wilson, W. H., Aberdeen, S. Dak.	149
Weaver, Jesse H., Bottineau	160
Walker, Roy E., Valley City	154

PHYSICIANS IN NORTH DAKOTA.

Arranged Alphabetically According to Location.

Abercrombie, Fjelde, H. J.	Richland
Abercrombie, Ivers, M. N.	Richland
Ashley, Mearcklein, E. H.	McIntosh
Adams, Grunvold, F. O.	Walsh
Adams, Rukke, U.	Walsh
Ardock, Montgomery, John	Walsh
Almont, Barton	Morton
Aneta, Bennett, C. E.	Nelson
Antler, Perrin	Bottineau
Anamoose, Evenfield, H. M.	McHenry
Anamoose, Frankl, J.	McHenry
Anamoose, Schrod, Frederick	McHenry
Balfour, Stone, G. C.	McHenry
Balfour, Norris	McHenry
Bailie, Bailey, S. W.	Dunn
Bantry, Livingston	McHenry
Barton, Sorenson, A. R.	Pierce
Barlow, McNamara, C. J.	Foster
Bathgate, Burrows, F. N.	Pembina
Bathgate, James, H. J.	Pembina
Beach, Melvin, W. H.	Billings
Beach, McNab, A. B.	Billings
Berthold, Hillis, S. L.	Ward
Berwick, Stewes, E. A.	McHenry
Binford, Truscott, J. R.	Griggs
Bisbee, Oftedahl, A.	Towner
Bisbee, Swenson, A. A.	Towner
Bismarck, Baker, D. A.	Burleigh
Bismarck, Bently, W. F.	Burleigh
Bismarck, Campbell, D. R.	Burleigh
Bismarck, Chambers, C. L.	Burleigh
Bismarck, Foster, N. B.	Burleigh
Bismarck, Forbes, W. B.	Burleigh
Bismarck, Holt, E. H.	Burleigh
Bismarck, Mann, J. F.	Burleigh
Bismarck, Matchen, W. G.	Burleigh
Bismarck, Quain, E. P.	Burleigh
Bismarck, Quain, Fanny Dunn	Burleigh
Bismarck, Roan, M. W.	Burleigh

Bismarck, Ramstad, N. O.	Burleigh
Bismarck, Smyth, F. R.	Burleigh
Bismarck, Salbreitee, W. C.	Burleigh
Bottineau, Johnson, J. A.	Bottineau
Bottineau, McKay, A. R.	Bottineau
Bowbells, Doe, A. L.	Ward
Bowbells, Lenfest, J. W.	Ward
Bowbells, Limburg, A. M.	Ward
Bowden, Neukamp, Hugo	Wells
Bowesmont, McKay, John F.	Pembina
Braddock, Welsh, T. W.	Emmons
Brinsmade, Joyce, M. T.	Benson
Brockey, Ferguson, S. M.	Ramsey
Budford, McManus, F.	Ramsey
Budford, Drake, J. H.	Ramsey
Buffalo, Clark, S. B.	Cass
Buxton, Knutson, O. A.	Traill
Calvin, Porter, Wm.	Cavalier
Calvin, Bordwell, F. A.	Cavalier
Cando, Harris, F. C.	Towner
Cando, Lamont, J. G.	Towner
Cando, Roberts, I.	Towner
Carldo, Vaughan	Towner
Cando, Irby, M. R.	Towner
Cannon Ball, Rice, P. F.	Morton
Carpio, Morrison, J. F.	Ward
Carrington, Goss, E. L.	Foster
Carrington, MacKenzie, J. R.	Foster
Carpio, Fisk, D. A.	Ward
Casselton, Baldwin, W. P.	Cass
Casselton, Hornell, L. C.	Cass
Casselton, Rowe, H. J.	Cass
Cathay, Niles, C. M.	Wells
Cathay, Piper	Wells
Cavalier, Walker, J. J.	Pembina
Cavalier, Scott, R. A.	Pembina
Cayuga, Else, J. C.	Sargent
Cayuga, Hubbard, F. G.	Sargent
Chaffee, Bibby Elias	Cass
Christine, Iverson, I. N.	Richland
Churches Ferry, Flath, A.	Ramsey
Cleveland, McClusky, O. W.	Stutsman
Clifford, Heinz, Chas. F.	Traill
Clyde, McKay	Cavalier
Cogswell, Howard, Chas. E.	Sargent
Cogswell, Saylor, H. L.	Sargent
Columbus, Blanchard, Harold B.	Ward

Conrway, Church, R. J.	Walsh
Cooperstown, Almplov, L.	Griggs
Cooperstown, Brimi, C. L.	Griggs
Cooperstown, Westley, M. D.	Griggs
Coteau, Hammond, J. L.	Ward
Courtney, Sansing, C.	Stutsman
Courtney, Wendell, G. W.	Stutsman
Crary, Drew, G. F.	Ramsey
Crosby, Lancaster, Blake	Williams
Crystal, Willson, H. S.	Pembina
Davenport, Haugen, H. F.	Cass
Dawson, Pyrse, T. S.	Kidder
Dazey, Nolte	Barnes
Deering, Owenson, H. A.	McHenry
Denbigh, Norris	McHenry
Denbigh, Sarchet	McHenry
Des Lacs, Halverson, H. L.	Ward
Devils Lake, Horsman, A. T.	Ramsey
Devils Lake, Jones, W. D.	Ramsey
Devils Lake, Moeller, Henrich	Ramsey
Devils Lake, Onsum, Enar	Ramsey
Devils Lake, McGurrien, C. F.	Ramsey
Devils Lake, Sihler, W. F.	Ramsey
Devils Lake, Smith, Clinton	Ramsey
Devils Lake, Flynn, Wm.	Ramsey
Devils Lake, Williams, Maude R.	Ramsey
Dickey, Tobert, W. F.	La Moure
Dickey, Norris, Norris	La Moure
Dickinson, Davis, H. A.	Stark
Dickinson, Fisher, Stephen	Stark
Dickinson, Perkins, G. A.	Stark
Smith, L. C.	Stark
Dickinson, Smith, Sarah Ethel	Stark
Dickinson, Stickney, U. G.	Stark
Dickinson, Stribbling, J. W.	Stark
Dickinson, Weyrens, J. R.	Stark
Donnybrook, Moffatt, Geo.	Ward
Donnybrook, Rogers, Joseph	Ward
Drake, Trimbo, J. H.	McHenry
Drayton, Hood, C. E.	Pembina
Drayton, Waldren	Pembina
Driscoll, Burket, J. A.	Burleigh
Dwight, Boslough, A. W.	Richland
Eckman, Wheelock, D. O.	Bottineau
Edgeland, Barbour, H. W.	La Moure
Edgeland, Miracle, H. W.	La Moure
Edmore, Cox, R. M.	Ramsey

Edmore, Lee, M. A.	Ramsey
Edinburg, Bell, David	Walsh
Egeland, Lindner, E. R.	Towner
Ellendale, Lynde, Roy	Dickey
Ellendale, Merchant, M. F.	Dickey
Ellendale, Stephenson, J. L.	Dickey
Ellendale, Stephenson, Robert	Dickey
Emmet, Linner, J. F.	McLean
Emerado, McKay, C. A.	Grand Forks
Enderlin, Gerrish, W. A.	Ransom
Enderlin, Overgard, Simon	Ransom
Enderlin, Kennady, Wm. J.	Ransom
Enderlin, Davies, H. M.	Ransom
Enderlin, Strong, T. J.	Ransom
Erie, Coffin, S. D.	Cass
Esmond, Crawford, John	Benson
Fairdale, Lindberg, Chas.	Walsh
Fairmount, Greeman, N. H.	Walsh
Fairmount, Kititey, W. E.	Walsh
Fairmount, Steele, D. C.	Walsh
Fairmount, Durkee, A. C.	Walsh
Fargo, Bailey, F. H.	Cass
Fargo, Brown, W. W.	Cass
Fargo, Burton, P. H.	Cass
Fargo, Callander, C. N.	Cass
Fargo, Campbell, J. W.	Cass
Fargo, Carpenter, G. A.	Cass
Fargo, Charest, J. C. R.	Cass
Fargo, Darrow, E. M.	Cass
Fargo, Dillon, J. G.	Cass
Fargo, Folsom, E. H.	Cass
Fargo, Kechelmacher, C.	Cass
Fargo, Kaess, A. J.	Cass
Fargo, Wallarion, K. H.	Cass
Fargo, Morris, A. S.	Cass
Fargo, Rindlaub, E. P.	Cass
Fargo, Rindlaub, J. H.	Cass
Fargo, Rindlaub, M. B.	Cass
Fargo, Sand, Olaf	Cass
Fargo, Skelsey, A. W.	Cass
Fargo, Savage, J. F.	Cass
Fargo, Sorkness, Paul	Cass
Fargo, Tronness, N. L.	Cass
Fargo, Vidal, J. W.	Cass
Fargo, Weibel, R. E.	Cass
Fessenden, MacGregor, M.	Wells
Fessenden, Oyen, Per	Wells

Fingal, Artz, Phil G.	Barnes
Finley, Weimark, A. J.	Steele
Finley, Bacharach, H.	Steele
Flasher, Shortridge, W. R.	Morton
Forbes, Ames, A. J. J.	Dickey
Forest River, Field, A. B.	Walsh
Flaxton, Paulson, A. J.	Ward
Forman, Bradley, W. A.	Sargent
Fort Ransom, Gronwold, A. C.	Ransom
Fullerton, Stokes, G. P.	Dickey
Fullerton, Stokes, G. P.	Dickey
Gardner, Campbell, C.	Cass
Galesburg, Huber	Traill
Garrison, Ray, R. H.	McLean
Gackle, Huntley, H. B.	Logan
Gackle, Schuridin, C. H.	Logan
Gilby, McLean, R. M.	Grand Forks
Glenburn, Knudson, C. A.	Ward
Glenburn, Lord, C. B.	Ward
Glen Ullin, Kearney, P. F.	Morton
Glen Ullin, Benson, C. F.	Morton
Goodrich, McReynolds, C. E.	McLean
Grafton, Countryman, J. E.	Walsh
Grafton, Flatten, A. A.	Walsh
Grafton, Glaspel, G. W.	Walsh
Grafton, Moore, D. S.	Walsh
Grafton, Suter, G.	Walsh
Grandin, Platt, C. D.	McHenry
Grand Forks, Bates, W. H.	Grand Forks
Grand Forks, Bentzen, Olaf	Grand Forks
Grand Forks, Campbell, R. D.	Grand Forks
Grand Forks, Crane, C. S.	Grand Forks
Grand Forks, Duggan, F. J.	Grand Forks
Grand Forks, Eckern, A.	Grand Forks
Grand Forks, Engstad, J. E.	Grand Forks
Grand Forks, Eggers, August	Grand Forks
Grand Forks, Fawcett, John	Grand Forks
Grand Forks, Gislason, G. J.	Grand Forks
Grand Forks, Grassick, J.	Grand Forks
Grand Forks, Healy, H. H.	Grand Forks
Grand Forks, Irwin, S. H.	Grand Forks
Grand Forks, McDonald, A. L.	Grand Forks
Grand Forks, McManus, W. F.	Grand Forks
Grand Forks, Mulligan, Thomas	Grand Forks
Grand Forks, O'Keefe, Henry	Grand Forks
Grand Forks, Stewart, Zella White	Grand Forks
Grand Forks, Taylor, J. D.	Grand Forks

Grand Forks, Westeen, A. A.	Grand Forks
Grand Forks, Wheeler, H. M.	Grand Forks
Grand Forks, Witherstine, W. H.	Grand Forks
Grand Forks, Woutatt, H. G.	Grand Forks
Grand Forks, Marsden, C. S.	Grand Forks
Granville, Barrett, J. H.	McHenry
Granville, Davis, J. S.	McHenry
Grunner, Williams, R. P.	Sargent
Grano, Combs, F. B.	Ward
Hankinson, Spottswood, C. P.	Richland
Hankinson, Young	Richland
Hannaford, Curtis, A. R.	Griggs
Hannaford, Leslie, A. C.	Griggs
Hannah, Law, H. W. F.	Cavalier
Hague, Davis, R. N.	Emmons
Harvey, Clark, I. D.	Wells
Harvey, Eede, W. E.	Wells
Hampton, Blair, A. R.	Ramsey
Hamilton, Rouse, D. E.	Pembina
Hamilton, Roberts, P. F.	Pembina
Hatton, Canfield, H.	Traill
Hatton, Seehus, O. M.	Traill
Havana, Lyle, W. D.	Sargent
Havana, Steele, G. A.	Sargent
Hazelton, Snyder, J. F.	Emmons
Hebron, Klein, Hy N.	Morton
Hillsboro, Anderson, A. G.	Traill
Hillsboro, Haagenon, C. E.	Traill
Hoople, Pierson, C. M.	Walsh
Hope, Harwood, E. B.	Steele
Hope, Hedding, J. A.	Steele
Hope, Fish, H. G.	Steele
Horace, Chagnon, Nap	Cass
Hurdsfield, Moody	Wells
Hurdsfield, Riggs, J. R.	Wells
Hunter, Bailie, Wm.	Cass
Hunter, Duncan, J. H.	Cass
Irene, Law	
Inkster, Lemery, B. D.	Grand Forks
Inkster, Livingston	Grand Forks
Irving, Wiltrout	
Jamestown, Baldwin, D.	Stutsman
Jamestown, DuPuy, R. G.	Stutsman
Jamestown, Guest, A.	Stutsman
Jamestown, Goldseth, G.	Stutsman
Jamestown, Hattendorf, Jessie	Stutsman
Jamestown, Hobert, Agnes	Stutsman

Jamestown, Miller, W. H.	Stutsman
Jamestown, Rankin, Jas.	Stutsman
Jamestown, Sifton, John	Stutsman
Jamestown, Freese, E. M.	Stutsman
Jamestown, Wink, H. K.	Stutsman
Kathryn, Rasmussen, F. P.	Barnes
Kenmare, Bell, D. H.	Ward
Kenmare, Kron	Ward
Kenmare, Neilson, Tord	Ward
Kenmare, Wiig, I. C. J.	Ward
Kenmare, McLean, N.	Ward
Kensal, Longstreth, W. E.	Stutsman
Kensal, Caldwell, T.	Stutsman
Kindred, Hysling, E.	Cass
Knox, Hanson, G. E.	Benson
Knox, Harris, L. A.	Benson
Kramer, Chadburn, A. G.	Bottineau
Kren, Eastman, L. G.	Mercer
Klum, Benn, F. G.	LaMoure
Klum, Brenckel, J. H.	LaMoure
Lakota, Beek, R. H.	Nelson
Lakota, Lohrbauer, E.	Nelson
Lakota, Simons, H. R.	Nelson
LaMoure, Hillis, A. E.	LaMoure
LaMoure, Ribble, G. B.	LaMoure
Langdon, Donovan, E. I.	Cavalier
Langdon, Gibson, S. G.	Cavalier
Langdon, McQueen, W. W.	Cavalier
Langdon, Semple, Jas.	Cavalier
Langdon, Meyon, J. J.	Cavalier
Lankin, Ware, E.	Walsh
Lansford, Devine, J. L.	Bottineau
Lansford, Eltun, T. J.	Bottineau
Lansford, Fisher, H. J.	Bottineau
Larimore, Rounswell, A. P.	Grand Forks
Larimore, Welsh, W. H.	Grand Forks
Lawton, Nicholson, E. G.	Ramsey
Leeds, Warren, J. W.	Benson
Leeds, Lund, A. B.	Benson
Leeds, Arneberg, J. G.	Benson
Lehr, Sweeney, J. H.	McIntosh
Lidgerwood, Loomis, E. A.	Richland
Lidgerwood, Shields, N. J.	Richland
Lidgerwood, Christianson, Walter	Richland
Leal, Buckman, C. E.	Barnes
Loma, Law, I. M.	Cavalier
Linton, Hogue, R. R.	Emmons

Linton, Wolverton, W. C.	Emmons
Lisbon, Johnson, J. H.	Ransom
Lisbon, Patterson, A. G.	Ransom
Lisbon, Patterson, T. C.	Ransom
Lisbon, Simmons, R. W.	Ransom
Lisbon, Wands, E. E.	Ransom
Litchville, Stixrud, T. M.	Barnes
Litchville, Spicer, T. E.	Barnes
McClusky, Brown, Fred	McLean
McHenry, LeBien, E. A.	Foster
McHenry, King, C. G.	Foster
McHenry, Ford, F. P.	Foster
McLean, Lyman, F. V.	Cavalier
McVile, Arneson, A. O.	Nelson
Maddock, Thams, T.	Benson
Mandan, Bunting, E. F.	Morton
Mandan, Furnss, G. B.	Morton
Mandan, LaRose, V. J.	Morton
Mandan, Stark, G. A.	Morton
Mannhaven, Smith, L. G.	Mercer
Mapleton, Mitchell, Sam'l	Cass
Maxbass, Collinson, T. W.	Bottineau
Mayville, Berg, S. A.	Traill
Mayville, Berg, C. A.	Traill
Mayville, McIntyre, Geo.	Traill
Mayville, White, Wm. E.	Traill
Max, Nicholson, McLean	McLean
Medford, Arnold	Walsh
Medina, Tood, G.	Stutsman
Michigan, Cowper, W. L.	Nelson
Michigan, Wagar, W. D.	Nelson
Milnor, Emaneul, H. W.	Sargent
Milnor, King, W. W.	Sargent
Milton, Esler, J.	Cavalier
Milton, Reilly, J. J.	Cavalier
Milton, Tyvand, J. C.	Cavalier
Minnewaukan, Powell, C. D.	Benson
Minnewaukan, Schultz, L.	Benson
Minot, Carr, A.	Ward
Minot, Crocket, E. A.	Ward
Minot, Gunz, A. N.	Ward
Minot, Holbrook, P. E.	Ward
Minot, Hyndman, H. P.	Ward
Minot Kermott, H. L.	Ward
Minot, McCannell, A. J.	Ward
Minot, McCannell, A. D.	Ward
Minot, Moeller, Thor	Ward

Minot, Taylor, J. D.	Ward
Minot, Larson, E. M.	Ward
Minot, Titus, C. L.	Ward
Minot, Newlove, J. J.	Ward
Minot, Newlove, U. T.	Ward
Minot, Pence, R. W.	Ward
Minot, Stone, Guy	Ward
Minot, Ransom, E. M.	Ward
Minot, Ringo, R. G.	Ward
Minot, White, S. G.	Ward
Minot, Windell	Ward
Minto, Evans, R. M.	Walsh
Mohall, Fitzmaurice, E. S.	Ward
Mohall, Halliday, Jas.	Ward
Mohall, Wright, G. A.	Ward
Mott, Mauzey, Geo.	Hettinger
Mooreton, Aborn, W. H.	Richland
Munich, Brooks, G. W.	Cavalier
Munich, Young, W. H.	Cavalier
Napoleon, Mathews, G. A.	Logan
Neché, Donovan, P. C.	Pembina
Neché, Montgomery, C. J.	Pembina
Niagara, St. John, F. A.	Grand Forks
Nekoma, Benoit, F. F.	Cavalier
Newburg, Dunn, J. C.	Bottineau
New Rockford, MacLachlan, Chas.	Eddy
New Rockford, Hotchkiss, W. M.	Eddy
New Salem, Beresna, J. F.	Morton
New Salem, Bodensath, W. K.	Morton
Nome, Spear, E. D.	Barnes
Northwood, Peterson, O. T.	Grand Forks
Oakes, Branstad, J. P.	Dickey
Oakes, Mearcklein, F. W.	Dickey
Oakes, Mearcklein, Irvin	Dickey
Oakes, Meadows, E. M.	Dickey
Oakes, Ryder, B. E.	Dickey
Oberon, Stickelberger, Josephine	Benson
Oberon, Ten Brook, L. L.	Benson
Oriska, Crosby, E.	Barnes
Olga, Blackburn	Cavalier
Olga, Porter, W. J.	Cavalier
Olga, Robillard, Paul	Cavalier
Omeeme, Stuart, M. A.	Bottineau
Osnabrock, Oswald, J. M. D.	Cavalier
Overly, Thomas	Rolette
Page, Scanlin, W.	Cass
Park River, Back, John J.	Walsh

Park River, Burstad, L.	Walsh
Park River, Halldorsson, M.	Walsh
Park River, Douglas, Sam	Walsh
Park River, Sandveen, N. O.	Walsh
Park River, Schance, H. S.	Walsh
Pembina, Harris, C. B.	Pembina
Penn, Rogers, R. V.	Ramsey
Perth, Carter	Towner
Perth, Simons, C. E.	Towner
Pingree, Vand Ever, H.	Stutsman
Portland, Wadel	Traill
Ray, Scott, W. S.	Williams
Ray, Abplanope, Ira	Williams
Reynolds, McArthur	Traill
Rolette, Poppe, Y. P.	Rolette
Rolette, Bordwell, F. O.	Rolette
Rolette, Castle, H. E.	Rolette
Rolette, Claubaugh, W. R.	Rolette
Rolla, Verret, B. D.	Rolette
Rolla, Widmeyer, J. P.	Rolette
Rolette, Plourde	Rolette
Ross, Richmond, C. D.	Ward
Ruder, Mikelson, G.	Williams
Rugby, Call, A. M.	Pierce
Rugby, Callison, H. M.	Pierce
Rugby, Frankson, Benj.	Pierce
Rugby, McBride, I. M.	Pierce
Rugby, Whittemore, A. A.	Pierce
Rutland, Parker, C. H.	Pierce
Russell, Godfrey, W. H.	Bottineau
Russe, Aaker, A. O.	McLean
Sanborn, Barton, Ira	Barnes
Sanborn, Lang, A. A. J.	Barnes
Sarles, Erskine, G. F.	Cavalier
Sarles, Underwood, T.	Cavalier
Sawyer, Smith, H.	Ward
Sentinel Butte, Kitchen, J. L.	Billings
Sheldon, Hoff, A. C.	Ransom
Sherwood, Dorland, Fred M.	Ward
Sherwood, Keys, M. J.	Ward
Sheyenne, Bartley, W. M.	Eddy
Sheyenne, Olson, O. A.	Eddy
Souris, Halldorson, M. B.	Bottineau
Souris, Begtrup, O. A.	Bottineau
St. John, Warren, John	Rolette
St. Thomas, McEssy, E. W.	Pembina
St. Thomas, Brown, W. M.	Pembina

Stanley, Miller, G. H.	Ward
Stanley, Trainor	Ward
Stanley, Concord, C. E.	Ward
Starkweather, Fawcett, W. C.	Ramsey
Steele, Gordon, W. L.	Kidder
Schafer, Morris, U. G.	McKenzie
Sykeston, Swarthout	Wells
Sykeston, Moore, W. H.	Wells
Taylor, Henning, A. J.	Stark
Tolley, Rainville, Sam	Ward
Tolley, Dalangar, N. O.	Ward
Tower City, Alexandra, J. C.	Cass
Towner, Martin, T. P.	McHenry
Towner, Rowe, O. W.	McHenry
Towner, Kermott, J. H.	McHenry
Turtle Lake, Barker, A. A.	McLean
Turtle Lake, Heinzeroth, V. E.	McLean
Tioga, Stobie, R. H.	Williams
Upham, Ludsey, J. R.	McHenry
Underwood, Torland, A.	McLean
University, Rudiger, Gustave F.	Grand Forks
Valley City, MacDonald, A. W.	Barnes
Valley City, Connell, Frances M.	Barnes
Valley City, Peake, Francis	Barnes
Valley City, Peake, Arthur	Barnes
Valley City, MacLachlan, T. M.	Barnes
Valley City, Platou, L. S.	Barnes
Valley City, Van Houten, J.	Barnes
Valley City, Pray, E. A.	Barnes
Velva, Johns, S. M.	McHenry
Velva, Ritchie	McHenry
Velva, Eltrum, J. T.	McHenry
Verona, Stough, R. W.	LaMoure
Wahpeton, Devine, R. H.	Richland
Wahpeton, Kaufman, Carl	Richland
Wahpeton, O'Brien, T.	Richland
Wahpeton, Quick, J. T.	Richland
Wahpeton, Meckstroth, L. W.	Richland
Walcott, -Bean, O. G.	Richland
Wales, Bacchas, A. S.	Cavalier
Walford, Wincett, C. V.	Pierce
Walhalla, Mowatt, W.	Pembina
Walhalla, Scott, W. W.	Pembina
Washburn, Douglas, F. A.	McLean
Washburn, Forbes, C. G.	McLean
Washburn, Sawyer, M. H.	McLean
Warwick, Carter, J. A.	Benson

Webster, McIntosh, J. G.	Ramsey
Westhope, Durnin, Chas.	Bottineau
Westhope, Durnin, Geo.	Bottineau
Wheatland, Jamison, A. J.	Cass
Wheatland, Salvage, F. E.	Cass
Wimbledon, Caldwell,	Barnes
Wimbledon, Wanner, W. B.	Barnes
Woodbury, Harriet	Burleigh
Wolford, McMurty, W. C.	Pierce
Williston, Belyea, J. H.	Williams
Williston, Belyea, E. H.	Williams
Williston, Hagen, E. G.	Williams
Williston, Dochterman, L. B.	Williams
Williston, LeBerge, P. U.	Williams
Williston, Mylestaad, M.	Williams
Williston, Wendell	Williams
Williston, Will, P. S.	Williams
Williston, VanDyke, F. H.	Williams
Willow City, Anderson, C. O.	Bottineau
Willow City, Jacobi, W. K.	Bottineau
Wilton, Thompson, R. T.	McLean
Wilton, Wheelon, Wm. P.	McLean
Wishek, Grant, Geo.	McIntosh
Wyndmere, Mearcklein, A. S.	Richland
Wyndmere, Mearcklein, J. R.	Richland
Wyndmere, Sherping, E. T.	Richland
York, Poole, C. U. B.	Benson
Zeeland, Quinn, W. M.	McIntosh

LIST OF LICENSED PHYSICIANS.

List of Physicians Licensed to Practice in North Dakota Alphabetically Arranged as to Names.

Name and Address.

Aaker, A. O., Russell	Bottineau
Aborn, W. H., Mooreton	Richland
Ablanolt, Ira, Ray	Williams
Alexandera, J. C., Tower City	Sass
Almplov, L., Cooperstown	Griggs
Ames, A. J., Forbes	Dickey
Anderson, C. O., Willow City	Bottineau
Anderson, A. G., Hillsboro	Traill
Arneberg, G. H., Leeds	Benson
Arneson, A. O., McVile	Nelson
Arnold, Medford	Walsh
Artz, Phil G., Fingal	McHenry
Barker, A. A., Turtle Lake	McLean
Barton, Ira, Sanborn	Barnes
Back, J. J., Park River	Walsh
Bacchus, A. S., Wales	Cavalier
Barrett, J. H., Granville	McHenry
Bates, W. H., Grand Forks	Grand Forks
Bacharach, H., Finley	Steele
Bailey, F. H., Fargo	Cass
Bailey, S. W., Bailey	Dunn
Baker, D. A., Bismarck	Burleigh
Baldwin, W. P., Casselton	Cass
Baldwin, D., Jamestown	Stutsman
Bartley, W. M., Sheyenne	Eddy
Barton, Almont	Morton
Baillie, Wm., Hunter	Cass
Bean, O. G., Walcott	Richland
Barbour, H. W., Edgeley	LaMoure
Belyea, J. H., Williston	Williams
Belyea, E. H., Williston	Williams
Benoit, F. F., Nekoma	Cavalier
Beresna, J. F., New Salem	Morton
Berg, S. A., Mayville	Traill
Beek, R. H., Lakota	Nelson
Benn, F. G., Klum	LaMoure
Bell, D. H., Kenmare	Ward

Bentzen, Olaf, Grand Forks	Grand Forks
Benson, O. F., Glen Ullin	Morton
Bell, David, Enderlin	Walsh
Bentley, W. F., Bismarck	Burleigh
Bennett, C. E., Aneta	Nelson
Begstrup, O. A., Souris	Bottineau
Bodenstab, E. W., New Salem	Morton
Bordwell, F. O., Rolette	Rolette
Boslough, A. W., Dwight	Richland
Bordwell, F. A., Calvin	Cavalier
Blackburn, Olga	Cavalier
Blanchard, H., Columbus	Ward
Blair, A. R., Hampton	Ramsey
Bradstad, J. P., Oakes	Dickey
Brudstad, L., Park River	Walsh
Brooks, G. H., Munich	Cavalier
Brown, Fred, McClusky	McLean
Brown, W. M., St. Thomas	Pembina
Brown, W. H., Fargo	Cass
Brimi, C. L., Cooperstown	Griggs
Bradley, W. M., Forman	Sargent
Bunting, E. F., Mandan	Morton
Buckman, C. E., Leal	Barnes
Burket, J. A., Driscoll	Burleigh
Burrows, F. N., Bathgate	Pembina
Burton, P. H., Fargo	Cass
Bibby, Elias, Chaffee	Cass
Carter, J. A., Warwick	Benson
Campbell, D. R., Bismarck	Burleigh
Campbell, J. W., Fargo	Cass
Campbell, R. D., Grand Forks	Grand Forks
Campbell, C., Gardner	Cass
Caldwell, Wimbledon	Barnes
Callander, C. M., Fargo	Cass
Carpenter, G. A., Fargo	Cass
Canfield, H., Hatton	Traill
Caldwell, T., Kensal	Stutsman
Carr, A., Minot	Ward
Castle, H. E., Rolette	Rolette
Call, A. M., Rugby	Pierce
Collison, H. M., Rugby	Pierce
Coffin, S. D., Erie	Cass
Combs, F. B., Grano	Ward
Cowper, W. L., Michigan	Nelson
Connell, Frances M., Valley City	Benson
Conrod, C. E., Stanley	Ward
Collinson, T. W., Maxbass	Bottineau

Countryman, J. E., Grafton	Walsh
Cox, R. M., Edmore	Ramsey
Chambers, C. L., Bismarck	Burleigh
Church, J. R., Conway	Walsh
Charest, J. C. R., Fargo	Cass
Chagnon, Napoleon, Horace	Cass
Chadburn, A. G., Kramer	Bottineau
Christianson, Walter, Lidgerwood	Richland
Clark, I. D., Harvey	Wells
Claubaugh, W. R., Rolette	Rolette
Crawford, John, Esmond	Benson
Crosby, E., Oriska	Barnes
Cranes, C. S., Grand Forks	Grand Forks
Crocket, E. A., Minot	Ward
Curtis, A. R., Hannaford	Griggs
Clark, S. B., Buffalo	Cass
Davis, H. A., Dickinson	Stark
Davis, J. S., Granville	McHenry
Davis, H. M., Enderlin	Ransom
Davis, R. M., Hague	Emmons
Dalager, N. O., Tolley	Ward
Darrow, E. M., Fargo	Cass
Dochterman, L. B., Williston	Williams
Douglas, F. A., Washburn	McLean
Douglas, Sam, Park River	Walsh
Dorland, Fred, Sherwood	Ward
Donnovan, E. I., Langdon	Cavalier
Donnovan, P. C., Neche	Pembina
Doe, A. L., Bowbells	Ward
Drew, G. F., Crary	Ramsey
Drake, J. H., Budford	Williams
Devine, R. H., Wahpeton	Richland
Dillon, J. G., Fargo	Cass
Durnin, Chas., Westhope	Bottineau
Durnin, George	Bottineau
Dunn, J. C., Newburg	Bottineau
Duggan, F. J., Grand Forks	Grand Forks
Duncan, J. H., Hunter	Cass
DePuy, R. G., Jamestown	Stutsman
Durkee, C. A., Fairmount	Walsh
Eastman, L. G., Kren	Mercer
Eede, W. E., Harvey	Wells
Eltun, T. J., Lansford	Bottineau
Eltrum, J. T., Velva	McHenry
Else, J. T., Cayuga	Sargent
Eckern, A., Grand Forks	Grand Forks
Eggers, August, Grand Forks	Grand Forks

Emanuel, H. W., Milnor	Cavalier
Engstad, J. E., Grand Forks	Grand Forks
Erskine, G. F., Sarles	Cavalier
Esler, J., Milton	Cavalier
Evans, R. M., Minto	Walsh
Evenfeld, H. M., Anamoose	McHenry
Fawcett, W. C., Starkweather	Ramsey
Fawcett, John, Grand Forks	Grand Forks
Ferguson, S. M., Brocket	Ramsey
Field, A. B., Forest River	Walsh
Fish, D. A., Carpio	Ward
Fish, G. H., Hope	Steele
Fisher, Stephen, Dickinson	Stark
Fisher, H. J., Lansford	Bottineau
Fitzmaurice, E. S., Mohall	Ward
Foster, N. B., Bismarck	Burleigh
Forbes, C. G., Washburn	McLean
Forbes, W. B., Bismarck	Burleigh
Folsom, E. H., Fargo	Cass
Ford, F. B., McHenry	Foster
Flynn, Wm., Devils Lake	Ramsey
Flath, A., Churchs Ferry	Ramsey
Flatten, A. A., Grafton	Walsh
Frankson, Benj., Rugby	Pierce
Frankl, J., Anamoose	McHenry
Freese, E. M., Jamestown	Stutsman
Furness, G. B., Mandan	Morton
Fjelde, H. J., Abercrombie	Richland
Gerrish, W. A., Enderlin	Ransom
Goss, E. L., Carrington	Foster
Godfrey, W. H., Russell	Bottineau
Gorden, W. L., Steele	Kidder
Goldseth, G., Jamestown	Stutsman
Grassick, J., Grand Forks	Grand Forks
Gronwold, A. C., Ft. Ransom	Sargent
Greenman, N. H., Fairmount	Walsh
Gronvold, F. O., Adams	Walsh
Grant, Geo., Wishek	McIntosh
Gislason, G. J., Grand Forks	Grand Forks
Gibson, S. G., Langdon	Cavalier
Guest, A., Jamestown	Stutsman
Gunz, A. N., Minot	Ward
Harris, F. C., Cando	Towner
Harris, C. B., Pembina	Pembina
Harris, L. A., Knox	Benson
Harriet, Woodbury	Burleigh
Haagenson, C. E., Hillsboro	Traill

Harwood, E. B., Hope	Steele
Hagen, E. G., Williston	Williams
Haugen, H. H., Davenport	Cass
Halliday, James, Mohall	Ward
Halldorson, M. B., Souris	Bottineau
Halldorson, M., Park River	Walsh
Hanson, G. E., Knox	Benson
Hattendorf, Jessie, Jamestown	Trall
Hammond, J. L., Coteau	Ward
Hedding, J. A., Hope	Steele
Healy, H. H., Grand Forks	Grand Forks
Heinz, Chas. I., Clifford	Trall
Henning, A. J., Taylor	Stark
Heingeroth, V. E., Turtle Lake	McLean
Heimark, H., Finley	Steele
Hillis, A. E., LaMoure	Sargent
Hillis, L. S., Berthold	Ward
Hoff, A. C., Sheldon	Ransom
Holt, E. H., Bismarck	Burleigh
Hotchkiss, W. M., New Rockford	Eddy
Holbrook, R. E., Minot	Ward
Hogue, R. R., Linton	Emmons
Hobert, Agnes, Jamestown	Stutsman
Hobart, W. F., Dickey	LaMoure
Hood, C. E., Drayton	Pembina
Hornell, L. C., Casselton	Cass
Horseman, A. T., Devils Lake	Ward
Holverson, H. L., DesLacs	LaMoure
Howard, Chas. E., Cogswell	Sargent
Huber, Galesburg	Trall
Huntley, H. B., Gackle	Logan
Hubbard, F. G., Cayuga	Sargent
Hysling, E., Kindred	Cass
Hyndman, H. P., Minot	Ward
Ivers, M. N., Abercrombie	Richland
Iverson, I. N., Christine	Richland
Irwin, S. H., Grand Forks	Grand Forks
Irby, M. R., Cando	Towner
Jacobi, W. K., Willow City	Bottineau
Jamison, A. J., Wheatland	Cass
James, H. J., Bathgate	Pembina
Johnson, J. H., Lisbon	Ransom
Johnson, J. A., Bottineau	Bottineau
Johns, F. M., Velva	McHenry
Jones, W. D., Devils Lake	Ramsey
Joyce, M. T., Brinsmade	Benson
Kaufman, Carl, Wahpeton	Richland

Kaess, A. J., Fargo	Cass
Kennedy, Wm. J., Enderlin	Ransom
Kechelmacher, C., Fargo	Cass
Kearney, P. F., Glen Ullin	Morton
Keys, J. M., Sherwood	Ward
Kermott, L. H., Minot	Ward
Kermott, J. H., Towner	McHenry
Kitiley, W. E., Fairmont	Walsh
King, C. J., McHenry	Foster
King, W. W., Milnor,	Sargent
Kitchen, J. L., Sentinel Butte	Morton
Klein, Hy N., Hebron	Morton
Knutson, O. A., Buxton	Trall
Knudson, C. A., Glenburn	Ward
Kron, Kenmare	Ward
Law, I. M., Loma	Sargent
Law, H. W. F., Hannah	Cavalier
Law, Irene	
Lang, A. A. J., Sanborn	Barnes
LaBerge, P. U., Williston	Williams
Larson, E. M., Minot	Ward
LaRose, U. J., Mandan	Morton
Lanchaster, Blake, Crosby	Williams
LaMont, J. G., Cando	Towner
Lenfest, J. W., Bowbells	Ward
Lee, M. A., Edmore	Ramsey
Lemery, B. D., Inkster	Grand Forks
Leslie, A. C., Hannaford	Griggs
LeBien, A. E., McHenry	Foster
Limburg, A. M., Bowbells	Ward
Lindner, Chas., Fairdale	Walsh
Linner, J. F., Emmet	McLean
Lindner, E. R., Egeland	Towner
Livingston, J. L., Inkster	Grand Forks
Livingston, Bantry	McHenry
Lord, C. B., Glenburn	Ward
Loomis, E. A., Lidgerwood	Richland
Lohrbauer, E., Lakota	Nelson
Longstreth, W. E., Kensal	Stutsman
Love, R. H., Thompson	Grand Forks
Lynde, Roy, Ellendale	Dickey
Lyle, W. D., Havana	Sargent
Lyman, F. V., McLean	Cavalier
Ludsey, J. R., Upham	McHenry
Lund, A. B., Leeds	Benson
MacDonald, A. W., Valley City	Barnes
MacLachlan, T. M., Valley City	Barnes

MacLachlan, Chas., New Rockford	Eddy
MacKenzie, J. R., New Rockford	Eddy
MacKenzie, J. R., Carrington	Foster
MacGregor, M., Fessenden	Wells
McArthur, Reynolds	Grand Forks
McLean, Neil, Kenmare	Ward
McQueen, W. W., Langdon	Cavalier
McGurren, C. J., Devils Lake	Ramsey
McDonald, A. L., Grand Forks	Grand Forks
McManus, W. F., Grand Forks	Grand Forks
McNamara, C. J., Barlow	Foster
McReynolds, C. E., Goodrich	McLean
McNab, A. B., Beach	Billings
McLean, R. M., Gilby,	Grand Forks
McKay, A. C., Emerado	Grand Forks
McKay, John F., Bowesmont	Pembina
McKay, A. R., Bottineau	Bottineau
McKay, Clyde	Cavalier
McClusky, O. W., Cleveland	Stutsman
McManus, F., Buford	Williams
McCannell, A. J., Minot	Ward
McCannell, A. D., Minot	Ward
McCullom, Chas., Portal	Ward
McBride, I. M., Rugby	Pierce
McEssy, E. W., St. Thomas	Pembina
McIntosh, G. H., Webster	Ramsey
McMurty, W. C., Wolford	Pierce
McIntyre, Geo., Mayville	Trail
Marsden, C. S., Grand Forks	Grand Forks
Mann, J. F., Bismarck	Burleigh
Matchen, W. G., Bismarck	Burleigh
Mallarian, K. H., Fargo	Cass
Mathews, G. A., Napoleon	Logan
Mauzey, Geo. W., Mott	Hettinger
Martin, T. P., Towner	McHenry
Melvin, W. H., Beach	Billings
Mayon, J. J., Langdon	Cavalier
Merchant, M. F., Ellendale	Dickey
Meadows, E. M., Oakes	Dickey
Mearcklein, Irvine R., Oakes	Dickey
Mearcklein, F. W., Oakes	Dickey
Mearcklein, E. H., Ashley	McIntosh
Mearcklein, A. S., Wyndmere	Richland
Mearcklein, E. T., Wyndmere	Richland
Meckstroth, L. W., Wahpeton	Richland
Moeller, Thor, Minot	Ward
Moeller, Henrich, Devils Lake	Ramsey

Miller, G. H., Stanley	Ward
Miller, W. H., Jamestown	Stutsman
Miracle, H. W., Edgeland	La Moure
Mikelson, G., Rudser	Williams
Mitchel, Sam, Mapleton	Cass
Montgomery, C. G., Neche	Pembina
Morris, U. G., Shafer	Logan
Mowall, W., Walhalla	Pembina
Morria, A. C., Fargo	Cass
Mulligan, Thomas, Grand Forks	Grand Forks
Moore, D. S., Grafton	Walsh
Moody, Hurdsville	Stutsman
Moffat, Geo., Donnybrook	Ward
Morrison, J. F., Carpio	Ward
Montgomery, John, Ardock	Walsh
Mystead, M., Williston	Williams
Newlove, J. W., Rugby	Pierce
Newlove, J. T., Minot	Ward
Newlove, J. J., Minot	Ward
Neukamp, Hugo, Bowden	Wells
Neilson, Ttord, Kenmare	Ward
Nicholson, Max	McLean
Nicholson, E. G., Lawton	Ramsey
Norris, H. C. R., Dickey	La Moure
Norris, Balfour	McHenry
Norris, Denbigh	McHenry
Nolte, Dazey	Barnes
Niles, C.-M., Cathay	Wells
O'Brien, T., Wahpeton	Richland
O'Keefe, Henry, Grand Forks	Grand Forks
Olson, O. A., Sheyenne	Eddy
Onsum, Emar, Devils Lake	Ramsey
Oftedahl, A., Bisbee	Towner
Oswold, J. M. D., Osnabrock	Cavalier
Overgard, Simon, Enderlin	Ransom
Oyen, Per, Fessenden	Wells
Owenson, H. A., Deering	McHenry
Parker, C. G., Rutland	Pierce
Patterson, A. G., Lisbon	Ransom
Patterson, T. C., Lisbon	Ransom
Paulson, A. J., Flaxton	Ward
Perkins, Geo. A., Dickinson	Stark
Peterson, O. T., Northwood	Grand Forks
Peake, Francis, Valley City	Barnes
Peake, Arthur, Valley City	Barnes
Pence, R. W., Minot	Ward
Platt, O. D., Grandin	McHenry

Plourde, Rolla	Rolette
Platou, L. S., Valley City	Barnes
Perin, Antler	Bottineau
Porter, Wm., Calvin	Cavalier
Porter, W. J., Olga	Cavalier
Poppe, Y. P., Rolette	Rolette
Poole, C. V. B., York	Benson
Powell, C. D., Minnewaukan	Benson
Piper, Cathay	Wells
Pierson, C. M., Hoople	Walsh
Pryse, T. S., Dawson	Kidder
Pray, E. A., Valley City	Barnes
Quain, E. P., Bismarck	Burleigh
Quinn, W. H., Zeeland	McIntosh
Quick, J. T., Wahpeton	Richland
Quain, Fanny Dunn, Bismarck	Burleigh
Ray, R. H., Garrison	McLean
Ramstad, N. O., Bismarck	Burleigh
Rankin, Jas., Jamestown	Stutsman
Rasmussen, F. P., Kathryn	Barnes
Rainville, Sam, Tolley	Ward
Ransom, E. M., Minot W.	Ward
Reilley, J. J., Milton	Cavalier
Richmond, C. D., Ross	Ward
Rowe, O. W., Towner	McHenry
Ringo, R. G., Minot	Ward
Ribble, G. B., La Moure	La Moure
Riggs, J. R., Hurdsfield	Wells
Rindlaub, E. P., Fargo	Cass
Rindlaub, J. H., Fargo	Cass
Rindlaub, M. P., Fargo	Cass
Rice, P. F., Cannon Ball	Morton
Ritchie, Velva	McHenry
Robillard, Paul, Olgo	Cavalier
Rogers, R. V., Penn	Ramsey
Rounsvell, A. P., Larimore	Grand Forks
Roberts, P. F., Hamilton	Pembina
Rouse, D. E., Hamilton	Pembina
Rowe, H. J., Casselton	Cass
Rowe, O. W., Towner	McHenry
Roberts, I., Cando	Towner
Roan, M. W., Bismarck	Burleigh
Rogers, Joseph, Donnybrook	Ward
Rukke, V., Adams	Walsh
Ruediger, Gustave F., University	Grand Forks
Ryder, B. E., Oakes	Dickey
Savage, F. E., Wheatland	Cass

